
APPENDIX

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A. Methodology for Calculating Capital Costs (by Residential Dwelling Unit Type)

Parks and Recreation

Recommended level of Service for Parks:

20 acres of usable land per 1000 citizens

Cost per Acre:

\$170,396 to acquire and develop one acre of County Parkland
 Used Patawomeck Park
 Phase I cost information
 Source: Stafford County Parks and Recreation Department

Cost per Housing Unit Type:

	<u>A</u>	<u>B</u>	<u>C</u>	<u>(AxBxC)=D</u>
Type of Housing Unit	Housing Unit Size	County Parkland per Capita	Cost/Acre to acquire and develop new parkland	Gross Cost per Housing Unit
Single Family	3.13	0.02	\$170,396	\$10,667
Townhouse	2.91	0.02	\$170,396	\$9,917
Multi-Family	2.57	0.02	\$170,396	\$8,758
Mobile Homes	1.89	0.02	\$170,396	\$6,440

Total Monetary Impact per Housing Unit:

Single Family : \$10,667
 Townhouse: \$9,917
 Multi-Family: \$8,758
 Mobile Home: \$6,440

Schools

Cost per Student

Elementary:	\$15,224,000	/	950	students	=	\$16,025
Middle:	\$26,280,000	/	1100	students	=	\$23,891
High:	\$55,650,000	/	1800	students	=	\$30,917

Source: Stafford County Public Schools

Cost per Housing Unit Type:

Facility + Land	Cost Per Student	Single Family Detached Student Generation	Cost for Single Family Detached by Education Level	Townhouse Student Generation	Cost for Townhouse by Education Level	Multi-Family Student Generation	Cost for Multi-Family by Education Level	Mobile Home Student Generation	Cost for Mobile Home by Education Level
Elementary	\$16,025	0.26	\$4,167	0.31	\$4,968	0.18	\$2,885	0.26	\$4,167
Middle	\$23,891	0.16	\$3,823	0.14	\$3,345	0.06	\$1,433	0.12	\$2,867
High	\$30,917	0.24	\$7,420	0.18	\$5,565	0.08	\$2,473	0.13	\$4,019
TOTAL			\$15,410		\$13,878		\$6,791		\$11,053

Monetary Impact per Housing Unit:

Single Family :	\$15,410
Townhouse:	\$13,878
Multi Family:	\$6,791
Mobile Home:	\$11,053

Libraries

Recommended Level of Service is defined as land, building square footage and material (books, furnishings, and equipment) needed in order to meet county standards.

Square feet of Library floor area per capita =	1.00
(1) Standard building size (in square feet) =	30,488
(2) Approximate Building Cost of New Library Facility (includes FF&E) =	\$10,300,000
Ideal acreage for one facility =	3.0

Cost Breakdown:

Square feet/capita =	1.00
Building cost/ square foot =	\$338
Building cost/ capita =	<u>\$338</u>

Number of people served by one Library Facility =	30,000
Acres/capita =	0.000100
(3) Cost/acre =	\$100,000
Acre Cost/capita =	<u>\$10</u>

Subtotal to acquire land and construct a new library facility per capita **\$348**

(4) Approximate Capital Equipment (books, materials, furnishings, technology) Cost =	\$1,500,000
Approximate equipment cost per square foot per capita =	<u>\$49</u>

Gross Cost per Capita **\$397**

Type of Housing Unit	Housing Unit Size	Cost of Library and Materials per Capita	Cost Per Housing Unit
Single Family	3.13	\$397	\$1,243
Townhouse	2.91	\$397	\$1,155
Multi-Family	2.57	\$397	\$1,020
Mobile Home	1.89	\$397	\$750

Monetary Impact per Housing Unit:

Single-Family :	\$1,243
Townhouse:	\$1,155
Multi-Family:	\$1,020
Mobile Home:	\$750

- (1) Actual size of Falls Run Library
- (2) Approximate building cost of Falls Run Library
- (3) Approximated land cost for Aquia Library (Falls Run Library site was proffered)
- (4) Approximate opening day collection cost for Falls Run Library - 75,000 books/materials

Fire and Rescue

Recommended Level of Service is defined as land, building square footage, and equipment needed in service Stafford County.

Total Population of Stafford County as of July 1, 2009	124,166
Total Square Footage for all F&R Facilities =	131,422
Square Feet of Fire and Rescue Building Needed (per capita) =	1.058
(1) Actual building size (in square feet) =	15,833
(2) Approximate Construction Cost (per station) =	\$5,273,000
Building cost/square foot =	\$333
Building Cost/capita =	<u>\$353</u>
Total acres all F&R Facilities are located on =	31.44
Ideal acreage for one facility =	3.0
Acres/capita =	0.00025
(3) Cost/acre =	\$166,667
Acre Cost/capita =	<u>\$42</u>
(4) Approximate Capital Equipment Cost (per station) =	\$1,750,000
Approximate equipment cost/square foot =	\$111
Total Equipment Cost for all F&R Facilities =	\$14,525,895
Equipment Cost/capita =	<u>\$117</u>
Total Square Footage of the Public Safety Building =	114,960
Square Footage Designated to the F & R Department =	24,176
Utilized Square Footage by the F & R Department =	20,062
Utilized Square Footage by the F&R Department (per capita) =	0.162
Approximate Construction Cost (of utilized square footage) =	\$6,369,720
Building cost/ utilized square foot =	\$318
Building Cost/ capita =	<u>\$51</u>
Gross Cost Per Capita	<u>\$563</u>

Type of Housing Unit	Housing Unit Size	Cost of Fire and Rescue Facility and Equipment per Capita	Gross Cost Per Housing Unit
Single Family	3.13	\$563	\$1,762
Townhouse	2.91	\$563	\$1,638
Multi-Family	2.57	\$563	\$1,447
Mobile Home	1.89	\$563	\$1,064

Monetary Impact per Housing Unit:

Single Family :	\$1,762
Townhouse:	\$1,638
Multi-Family:	\$1,447
Mobile Home:	\$1,064

- (1) Fire/Rescue Station 2 (2) Approximate Construction Cost for Fire/Rescue Station 2
 (3) Approximate Land Cost for Fire/Rescue Station 14
 (4) Approximate Equipment Cost for Fire/Rescue Station 14

Transportation

Road Impact Guideline Formula

Units Proposed X (# Secondary Road Lane Miles) X Average Cost of One Lane Mile = Impact of New Project
Units in County

OR

1 New Unit X (1,100-0) X \$1,800,000 = \$44,572
44,423 Existing Units as March 31, 2010

Source: Transportation Pre-Scoping Worksheet (Medium Cost for one Mile on Two-Lane Rural Road: \$3,600,000)

Single Family : 10.0 vehicle trips/ day
Townhouse : 7.0 vehicle trips/ day
Multi-Family : 4.0 vehicle trips/ day
Mobile Home : 4.8 vehicle trips/day

Monetary Impact per Housing Unit

Single Family : \$44,572
Townhouse : \$31,200
Multi-Family : \$17,829
Mobile Home : \$21,395

Law Enforcement

Public Safety Building (final contract cost) = 36,500,000

Total Population of Stafford County as of July 1, 2009	124,166	
Total Square Footage of the Public Safety Building =	114,960	
Square Footage Designated to the Sheriff's Office =	90,784	79.0%
Utilized Square Footage by the Sheriff's Office =	90,784	100.0%
Utilized Square Footage by the Sheriff's Office (per capita) =	0.731	
Approximate Construction Cost (of utilized square footage) =	\$28,824,078	
Building cost/ utilized square foot =	\$318	
Building Cost/ capita =	<u>\$232</u>	

Service Level Provided: Stafford County currently has one deputy for every 1,100 citizens.

Number of Law Enforcement Officers =	112
Capital Equipment Associated per Officer (police cruiser, laptop, etc.) =	\$45,000
Total Equipment Cost for all Officers =	\$5,040,000

Equipment Cost per Capita =	<u>\$41</u>	
Total Projected Population of Stafford County as of July 1, 2030 (from VEC) =	218,772	
Gross Total of Future Population Growth from 2010 to 2030 =	82,966	37.9%
911 Communications System (building cost from CIP) =	30,000,000	
Building Cost Attributed to Future Population Growth =	\$11,377,050	
Cost/ new capita =	<u>\$137</u>	
Square Footage of Animal Shelter Building Provided =	6,000	
Square Footage of Animal Shelter Building Provided (per capita) =	0.048	
Estimated Building Cost Per Square Foot for an Animal Shelter Building = Building cost/square foot =	\$250	
Building cost/ capita =	<u>\$12</u>	
Number of Animal Control Officers =	5	
Capital Equipment Associated per Officer (animal control truck, laptop, etc.) =	\$37,000	
Total Equipment Cost for all Officers =	\$185,000	
Equipment Cost per Capita =	<u>\$1</u>	
Gross Cost Per Capita	<u>\$423</u>	

Type of Housing Unit	Housing Unit Size	Gross Cost of Law Enforcement per Capita	Gross Cost Per Housing Unit
Single Family	3.13	\$423	\$1,325
Townhouse	2.91	\$423	\$1,231
Multi-Family	2.57	\$423	\$1,087
Mobile Home	1.89	\$423	\$799

Monetary Impact per Housing Unit:

Single Family :	\$1,325
Townhouse:	\$1,231
Multi-Family:	\$1,087
Mobile Home:	\$799

General Government

Building Cost (projects from the CIP)

Courthouse Addition = \$21,700,000

Community Development Service Center \$500,000

\$22,200,000

Source: Stafford County Budget Department

124,166 = 2009 population estimate (U.S. Census Bureau)

Cost/ capita = \$179

Gross Cost per Capita \$179

Type of Housing Unit	Housing Unit Size	Cost of General Government per Capita	Gross Cost per Housing Unit
Single Family	3.13	\$179	\$560
Townhouse	2.91	\$179	\$521
Multi-Family	2.57	\$179	\$460
Mobile Home	1.89	\$179	\$338

Monetary Impact per Housing Unit:

Single-Family : \$560

Townhouse: \$521

Multi-Family: \$460

Mobile Home: \$338

B. Public Facilities Plan

Fire and Rescue

Location Criteria:

- Future Fire and Rescue Stations will be located within the existing Urban Services Area (USA). Exceptions may be made when the only way to meet LOS Standards is to locate the station outside the USA.
- Fire/rescue stations should be located at points with quick and easy access to a major arterial or at an intersection of two arterials to gain both east-west and north-south access.
- Fire/rescue stations should be located near or part of mixed-use centers like Urban Development Areas (UDAs) and redevelopment areas where possible based on key site planning consideration such as access, safety and response time (locations of intense and dense anticipated growth)
- Response areas for each station should be established for areas in the USA and outside the USA

Site Selection/Design Criteria:

- Consideration should be given to co-locating fire and rescue for maximum efficiency. Consider co-locating with other public facilities like the Sheriff's Office. Coordination with other county agencies is recommended to provide more efficient services.
- Acquire sites between three to five usable acres to allow for providing co-location with other public facilities and possible future expansion. Slight variation in lot size may be necessary based upon the anticipated needs and building size construction of Fire and Rescue facilities.
- Encourage sites to be large enough to accommodate equipment storage and to allow maneuverability of the equipment to either pull-through or be backed into the garage bays without hindering traffic flows in the public right-of-way.
- Select and design sites to minimize the adverse impact of sirens and other noise on residential areas.
- Buildings should be a minimum of 15,000 square feet in size and accommodate one, two or three-bay designs depending on the needs within the service area.
- The standard capital equipment for each Fire and Rescue facility should be provided as follows: one engine and one ambulance. However, this does not exclude the need for additional equipment which is based on the location and need of each Fire and Rescue facility.

- Consider additional training facilities for the County F & R services (either on a regional or County level)

Facility Recommendations/Timing:

1.058 = Square feet provided per capita as of July 1, 2009
15,000 = Standard F&R Station Building Size (in square feet)

Year	Total Population Annually	Increase in Population Annually	Accumulating Population Increase	Additional F&R Building Square Footage Needed for this Year	Accumulating F&R Building Square Footage Needed	Total # of Facilities	New Facilities Needed
2006	118,450	n/a	n/a	n/a		14	0
2007 (1)	120,803	0	0	0		15	1
2008 (2)	122,090	0	0	0	0	16	0
2009 (3)	124,166	0	0	0	0	15	0
2010	135,806	11,640	11,640	12,320	12,320	15	0
2011	139,670	3,864	15,504	4,090	16,410	15	0
2012 (4)	143,644	3,974	19,478	4,206	20,616	15	0
2013	147,731	4,087	23,565	4,326	24,942	15	0
2014	151,935	4,203	27,769	4,449	29,391	16	1
2015	156,258	4,323	32,092	4,576	33,967	16	0
2016	160,149	3,891	35,983	4,119	38,086	16	0
2017	164,138	3,989	39,972	4,222	42,308	16	0
2018	168,226	4,088	44,060	4,327	46,635	17	1
2019	172,416	4,190	48,250	4,435	51,069	17	0
2020	176,710	4,294	52,544	4,545	55,615	17	0
2021	180,729	4,019	56,563	4,254	59,868	18	1
2022	184,839	4,111	60,673	4,351	64,219	18	0
2023	189,044	4,204	64,878	4,450	68,669	18	0
2024	193,343	4,300	69,177	4,551	73,220	18	0
2025	197,741	4,398	73,575	4,655	77,875	19	1
2026	201,779	4,038	77,613	4,274	82,148	19	0
2027	205,899	4,120	81,733	4,361	86,509	19	0
2028	210,103	4,204	85,937	4,450	90,959	20	1
2029	214,394	4,290	90,228	4,541	95,500	20	0
2030	218,772	4,378	94,606	4,634	100,135	20	0
-	-	-	Totals	100,135	-	-	5

US Census Bureau: Annual July 1st Population Estimate (2006-2009)
Historical Census Bureau Data With VEC Official Population Projections (2010-2030)

The draft FY2011-2016 CIP shows funding for FRD Station 14 (permanent) in FY2011 and 2012.

- (1) In 2007, Berea FRD Station #12 came online, the total number of FRD facilities increased to 15.
- (2) In 2008, a temporary FRD Station 14 was built to address ISO ratings increasing the total number of FRD facilities to 16.
- (3) In 2009, Stafford FRD Station #2 came online. FC #2 and RS #1 came offline reducing the total number of FRD facilities to 15.
- (4) In 2012, FRD Station 14 - North Stafford is projected to come online as a permanent facility.

Schools

Site Selection/Location Criteria:

- Future school sites will be located within the existing Urban Services Area (USA). Exceptions may be made when the only way to meet LOS Standards is to locate the school outside the USA.
- Provide locations for new schools that minimize travel distances for current as well as future students
- Elementary schools may be located within residential neighborhoods
- Elementary schools should be located with direct access to a collector road
- Middle and High schools site design should minimize impacts of the recreational areas on adjacent residences; sports facilities and their parking areas should be buffered from nearby homes
- Middle and High schools should be located with direct access to at least one major arterial road
- Pursue acquisition of school sites in projected growth areas of the County as identified on the Land Use Map
- Continue to coordinate school site planning and development with the Parks and Recreation Department in order to maximize community recreational facilities

Design Criteria:

Elementary Schools

- Recommended Site Acreage: At least 20 acres;
- Recommended Capacity: Maximum of 950 students;
- Recommended Classroom Size:
 - a. Special Ed - 10
 - Pre-K -18
 - Kindergarten -20
 - Grades 1-2 -22
 - Grades 3-5 -23
- Buildings should be a minimum of 88,000 square feet;
- Buildings should be constructed at a maximum height no greater than two stories;
- Other facility elements include a multi-use/gymnasium facility that should be provided at each elementary school sized to accommodate a regulation basketball court, bleachers, restroom facilities and storage rooms; and
- Grading for outdoor facilities to include the following community use facilities:
 - a. One (1) Little League/Softball Field with a 200-foot playing area with fences for a backstop and dugouts;

- b. One (1) Soccer/Football Field with minimum dimensions of 65 x 120 yards;
- c. Restroom access;
- d. Public Access Playground; and
- e. Parking adjacent to all facilities.

Middle Schools

- Recommended Site Acreage: At least 40 acres;
- Recommended Capacity: Maximum of 1,100 students;
- Recommended Classroom Size: 25 students;
- Buildings should be a minimum of 146,000 square feet;
- Buildings should be constructed at a minimum height no less than two stories;
- Other facility elements include a multi-purpose room/gymnasium facility that should be provided at each middle school sized to accommodate a regulation basketball court, bleachers, restroom facilities, storage room and locker rooms; and
- Grading for outdoor facilities to include the following community use facilities:
 - a. Two (2) Little/Softball Fields with a 200-foot playing area with fences for a backstop and dugouts;
 - b. Two (2) Soccer/Football Fields with minimum dimensions of 70 x 130 yards. One (1) Field with lights;
 - c. Access to restrooms;
 - d. Tennis Courts/Basketball Courts;
 - e. A Public Access Track; and
 - f. Parking adjacent to all facilities.

High Schools

- Recommended Site Acreage: At least 70 acres
- Recommended Capacity: Maximum of 1,800 students
- Recommended Classroom Size: 25 students
- Buildings should be a minimum of 265,000 square feet
- Buildings should be constructed at a minimum height no less than two stories
- Other facility elements include in addition to the main gymnasium, a second gymnasium (auxiliary gymnasium), that should be provided at each high school sized to accommodate a regulation basketball court, bleachers, restroom facilities, storage room and locker rooms.
- Grading for outdoor facilities to include the following community use facilities:
 - a. Two (2) Regulation Baseball Fields with fully enclosed playing area. One (1) Field with lights;
 - b. Two (2) Softball Fields with fully enclosed playing area. One (1) Field with lights;

- c. One (1) Regulation Football/Soccer Field with stadium;
- d. Three (3) Multi-Purpose Football/Soccer Fields with minimum dimensions of 70x 130 yards;
- e. Access to restrooms;
- f. Tennis Courts/Basketball Courts;
- g. A Public Access Track; and
- h. Parking adjacent to all facilities

Facility Recommendations/Timing:

Elementary Schools:

The methodology that was applied used a minimum threshold of 90 percent of design capacity usage in order to trigger the need for a new elementary school to be built.

Average Students per Dwelling Type		
0.26	0.31	0.18

Year	S.F.	T.H.	M.F.	Total Elementary Students	Cumulative Elementary Students	Students Relationship to Capacity	Design Capacity Usage %	New Elem School Needed	Cumulative Elem Schools Needed
2006									
2007	0	0	0	0					
2008	0	0	0	0					
2009	0	0	0	0		-3,075	78.6%		
2010	748	160	88	995	995	-2,080	85.6%		
2011	248	53	29	330	1,326	-1,749	87.9%		
2012	255	55	30	340	1,666	-1,409	90.2%		
2013	262	56	31	350	2,015	-2,010	86.9%	1	1
2014	270	58	32	359	2,375	-1,650	89.2%		
2015	278	59	33	370	2,745	-1,280	91.7%		
2016	250	53	29	333	3,077	-1,898	88.4%	1	2
2017	256	55	30	341	3,419	-1,556	90.5%		
2018	263	56	31	350	3,768	-2,157	87.5%	1	3
2019	269	58	32	358	4,126	-1,799	89.6%		
2020	276	59	32	367	4,494	-1,431	91.7%		
2021	258	55	30	344	4,837	-2,038	88.8%	1	4
2022	264	56	31	352	5,189	-1,686	90.7%		
2023	270	58	32	360	5,549	-2,276	88.1%	1	5
2024	276	59	33	368	5,916	-1,909	90.0%		
2025	282	60	33	376	6,292	-2,483	87.6%	1	6
2026	259	55	31	345	6,638	-2,137	89.4%		
2027	265	57	31	352	6,990	-1,785	91.1%		
2028	270	58	32	360	7,350	-2,375	88.7%	1	7
2029	276	59	32	367	7,717	-2,008	90.5%		
2030	281	60	33	374	8,091	-2,584	88.3%	1	8
Totals								8	

Middle Schools:

The methodology that was applied used a minimum threshold of 90 percent of design capacity usage in order to trigger the need for a new middle school to be built.

Average Students per Dwelling Type		
0.16	0.14	0.06

Year	S.F.	T.H.	M.F.	Total Middle School Students	Cumulative Middle School Students	Students Relationship to Capacity	Design Capacity Usage %	New Middle Schools Needed	Cumulative Middle Schools Needed
2006									
2007	0	0	0	0					
2008	0	0	0	0					
2009	0	0	0	0		-2,011	75.8%		
2010	460	72	29	562	562	-1,449	82.6%		
2011	153	24	10	186	748	-1,263	84.8%		
2012	157	25	10	192	940	-1,071	87.1%		
2013	162	25	10	197	1,137	-874	89.5%		
2014	166	26	11	203	1,340	-671	91.9%		
2015	171	27	11	209	1,548	-1,563	83.4%	1	1
2016	154	24	10	188	1,736	-1,375	85.4%		
2017	158	25	10	192	1,929	-1,182	87.4%		
2018	162	25	10	197	2,126	-985	89.5%		
2019	166	26	11	202	2,328	-783	91.7%		
2020	170	27	11	207	2,535	-1,676	84.1%	1	2
2021	159	25	10	194	2,729	-1,482	85.9%		
2022	162	26	10	198	2,927	-1,284	87.8%		
2023	166	26	11	203	3,130	-1,081	89.7%		
2024	170	27	11	207	3,338	-873	91.7%	1	3
2025	174	27	11	212	3,550	-1,761	84.8%		
2026	160	25	10	195	3,745	-1,566	86.5%		
2027	163	26	10	199	3,943	-1,368	88.2%		
2028	166	26	11	203	4,146	-1,165	90.0%		
2029	170	27	11	207	4,353	-2,058	83.8%	1	4
2030	173	27	11	211	4,564	-1,847	85.5%		
<u>Totals</u>								4	

High Schools:

The methodology that was applied used a minimum threshold of 90 percent of design capacity usage in order to trigger the need for a new high school to be built.

Average Students per Dwelling Type		
0.24	0.18	0.08

Year	S.F.	T.H.	M.F.	Total High School Students	Cumulative High School Students	Students Relationship to Capacity	Design Capacity Usage %	New High Schools Needed	Cumulative High Schools Needed
2006									
2007	0	0	0	0					
2008	0	0	0	0					
2009	0	0	0	0		-109	98.8%		
2010	690	93	39	822	822	-1,087	90.1%	1	1
2011	229	31	13	273	1,095	-1,914	84.1%	1	2
2012	236	32	13	281	1,376	-1,633	86.4%		
2013	242	33	14	289	1,664	-1,345	88.8%		
2014	249	34	14	297	1,961	-1,048	91.3%		
2015	256	35	15	305	2,266	-2,543	81.6%	1	3
2016	231	31	13	275	2,541	-2,268	83.6%		
2017	236	32	13	282	2,823	-1,986	85.6%		
2018	242	33	14	289	3,112	-1,697	87.7%		
2019	248	33	14	296	3,407	-1,402	89.9%		
2020	255	34	14	303	3,711	-1,098	92.1%		
2021	238	32	14	284	3,994	-2,615	83.3%	1	4
2022	244	33	14	290	4,285	-2,324	85.1%		
2023	249	34	14	297	4,582	-2,027	87.0%		
2024	255	34	14	304	4,885	-1,724	89.0%		
2025	261	35	15	311	5,196	-1,413	91.0%		
2026	239	32	14	285	5,481	-2,928	83.2%	1	5
2027	244	33	14	291	5,772	-2,637	84.9%		
2028	249	34	14	297	6,069	-2,340	86.6%		
2029	254	34	14	303	6,372	-2,037	88.3%		
2030	260	35	15	309	6,681	-1,728	90.1%		

Totals

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Parks and Recreation

Location/Site Selection Criteria:

- All parks should be co-located with other public facilities where appropriate.
- Acquisition of parkland adjacent to existing parks, athletic complexes and historic sites should be acquired for creation of buffers and to allow park expansion.
- Consider public/private partnerships or any other joint opportunities in the delivery of park and recreation service delivery.
- Encourage Virginia Department of Transportation (VDOT) to construct bicycle lanes and/or paths in conjunction with road widening projects.
- Locate sites adjacent to existing or planned residential areas to promote non-vehicular access and shorten drive time.
- Sites with athletic components requiring high water and/or sewage disposal must be located within the existing USA.
- Location of historical sites and natural area parks will be determined by the presence of historical and cultural resources, environmental features, the significance of wildlife habitat, the presence of endangered, threatened or state-listed flora and fauna, and the potential for educational, interpretive and low-impact recreational activities.

Facility Recommendations/Timing:

- 1,610 = Existing Acres of County Parkland
- 0.013 = Acres of Existing County Parkland/Capita
- 20 = Acres per 1,000 people (County Standard)
- 2,483 = Needed Acres of Parkland as of the July 1, 2009 Population Estimate
- 873 = Deficit of County Parkland that exists as of July 1, 2009
- \$170,396 = Cost to acquire and develop one acre of new County Parkland in 2009
- 8.0% = Annual Inflation Rate

Year	Population	Change in Population	Accumulating Population Increase	Acres of Parkland/Capita Per Year	Total Parkland Needed at this Year
2006	118,450	n/a	n/a	n/a	n/a
2007	120,803	0	0	0	0
2008	122,090	0	0	0	0
2009	124,166	0	0	0	2,483
2010	135,806	11,640	11,640	233	2,716
2011	139,670	3,864	15,504	77	2,793
2012	143,644	3,974	19,478	79	2,873
2013	147,731	4,087	23,565	82	2,955
2014	151,935	4,203	27,769	84	3,039
2015	156,258	4,323	32,092	86	3,125
2016	160,149	3,891	35,983	78	3,203
2017	164,138	3,989	39,972	80	3,283
2018	168,226	4,088	44,060	82	3,365
2019	172,416	4,190	48,250	84	3,448
2020	176,710	4,294	52,544	86	3,534
2021	180,729	4,019	56,563	80	3,615
2022	184,839	4,111	60,673	82	3,697
2023	189,044	4,204	64,878	84	3,781
2024	193,343	4,300	69,177	86	3,867
2025	197,741	4,398	73,575	88	3,955
2026	201,779	4,038	77,613	81	4,036
2027	205,899	4,120	81,733	82	4,118
2028	210,103	4,204	85,937	84	4,202
2029	214,394	4,290	90,228	86	4,288
2030	218,772	4,378	94,606	88	4,375
Totals				1,892	

Total Needed in addition to deficit

1,892

Total Needed including deficit

2,765

US Census Bureau: Annual July 1st Population Estimate (2006-2009)

Historical Census Bureau Data With VEC Official Population Projections (2010-2030)

Libraries

Location Criteria:

- Provide new facilities to adequately and equitably serve all areas of the County. Schedule library acquisition and/or construction to respond to both current unmet demand and new growth when it occurs.
- Future library sites shall be located within the existing Urban Services Area (USA). Exceptions may be made when the only way to meet LOS Standards is to locate the library outside the USA.
- Sites should be located along main travel corridors with consideration of minimizing users' drive time. The site should be chosen to support the mission of providing library material and services to the greatest number of people.
- Generally library sites should be at least six (6) acres in size to allow for a full size branch with adequate parking.
- An alternative to construction of new facilities is to establish new libraries in leased commercial spaces such as shopping centers. In Fredericksburg and other locations, public libraries serve as anchor stores and can draw one to two thousand citizens a day. Branches could be located within the Redevelopment Areas.

Site Selection/Design Criteria:

- Convenience and accessibility to the maximum number of users, direct access to a major arterial road.
- Preferred sites should have both north/south and east/west access.
- High visibility from major vehicular and pedestrian access routes.
- Proximity to compatible traffic-generating land uses, with evaluation similar to the needs for commercial retail business.
- Provide drive times 15 minutes or less to most parts of the service area.
- Accommodate a facility of at least 30,000 square feet.
- Provide parking at the rate of 4 spaces per 1,000 square feet of building space.
- Be incorporated into a variety of settings, including neighborhoods, adjacent to schools, or co-location with other public facilities as feasible, with relief to some criteria for co-location sites as determined by the Central Rappahannock Regional Library (CRRL).

Facility Recommendations/Timing:

- 39,907 = Existing square feet of Library building as of July 1, 2009
 0.321 = Square feet per capita as of July 1, 2009
 124,166 = Needed Square footage of Library building as of the July 1, 2009 Population Estimate
 1.00 = Square feet of Library building per capita (County Standard)
 84,259 = Deficit of Square footage of Library building that exists as of July 1, 2009
 30,000 = Square feet for Library building (County Standard)

Year	Total Population Annually	Change in Population Annually	Accumulating Population Increase	Additional Library Square Footage Needed for this Year	Total Library Square Footage Needed at this Year	Total # of Libraries	New Facilities Needed
2006	118,450	n/a	n/a	n/a	n/a	2	2
2007	120,803	0	0	0	0	2	0
2008	122,090	0	0	0	0	2	0
2009	124,166	0	0	0	0	2	0
2010 (1)	135,806	11,640	11,640	11,640	11,640	3	0
2011	139,670	3,864	15,504	3,864	15,504	3	0
2012	143,644	3,974	19,478	3,974	19,478	3	0
2013	147,731	4,087	23,565	4,087	23,565	3	0
2014	151,935	4,203	27,769	4,203	27,769	3	0
2015	156,258	4,323	32,092	4,323	32,092	4	1
2016	160,149	3,891	35,983	3,891	35,983	4	0
2017	164,138	3,989	39,972	3,989	39,972	4	0
2018	168,226	4,088	44,060	4,088	44,060	4	0
2019	172,416	4,190	48,250	4,190	48,250	4	0
2020	176,710	4,294	52,544	4,294	52,544	4	0
2021	180,729	4,019	56,563	4,019	56,563	4	0
2022	184,839	4,111	60,673	4,111	60,673	5	1
2023	189,044	4,204	64,878	4,204	64,878	5	0
2024	193,343	4,300	69,177	4,300	69,177	5	0
2025	197,741	4,398	73,575	4,398	73,575	5	0
2026	201,779	4,038	77,613	4,038	77,613	5	0
2027	205,899	4,120	81,733	4,120	81,733	5	0
2028	210,103	4,204	85,937	4,204	85,937	5	0
2029	214,394	4,290	90,228	4,290	90,228	6	1
2030	218,772	4,378	94,606	4,378	94,606	6	0
			Totals	94,606			3

US Census Bureau: Annual July 1st Population Estimate (2006-2009)
 Historical Census Bureau Data With VEC Official Population Projections (2010-2030)

(1) In the Fall of 2010, Falls Run Library is projected to come online, the total number of Library facilities will increase to 3.

Government and Judicial

Facility Recommendations/Timing:

193,125 = Existing square feet of Government building as of July 1, 2009
 1.56 = Square feet per capita as of July 1, 2009 (County Standard)
 \$179 = Cost of New Government building (per square footage)
 8.00% = Annual Inflation Rate

Year	Population	Change in Population	Accumulating Population Increase	Additional Gov't Building Square Footage Needed for this Year	Total Gov't Square Footage Needed at this Year
2006	118,450	n/a	n/a	n/a	n/a
2007	120,803	0	0	0	0
2008	122,090	0	0	0	0
2009	124,166	0	0	0	0
2010	135,806	11,640	11,640	18,105	18,105
2011	139,670	3,864	15,504	6,010	24,115
2012 (1)	143,644	3,974	19,478	6,181	30,296
2013	147,731	4,087	23,565	6,357	36,653
2014	151,935	4,203	27,769	6,538	43,191
2015 (2)	156,258	4,323	32,092	6,724	49,915
2016	160,149	3,891	35,983	6,052	55,968
2017	164,138	3,989	39,972	6,204	62,171
2018	168,226	4,088	44,060	6,358	68,530
2019	172,416	4,190	48,250	6,517	75,046
2020	176,710	4,294	52,544	6,679	81,726
2021	180,729	4,019	56,563	6,251	87,977
2022	184,839	4,111	60,673	6,394	94,370
2023	189,044	4,204	64,878	6,539	100,909
2024	193,343	4,300	69,177	6,688	107,597
2025	197,741	4,398	73,575	6,840	114,437
2026	201,779	4,038	77,613	6,280	120,717
2027	205,899	4,120	81,733	6,409	127,126
2028	210,103	4,204	85,937	6,540	133,665
2029	214,394	4,290	90,228	6,673	140,338
2030	218,772	4,378	94,606	6,810	147,148
			Total	147,148	

US Census Bureau: Annual July 1st Population Estimate (2006-2009)
 Historical Census Bureau Data With VEC Official Population Projections (2010-2030)

(1) In 2012, The Community Development Service Center is projected to come online, but will not add sq. ft. to the Gov't Building total.
 (2) In 2015, the Courthouse Addition is projected to come online adding approximately 40,000 sq. ft. to the Gov't Building total.

C. Land Use Compatibility Background for Range Compatibility Use Zones

Table C-1 Suggested Land Use Compatibility in Noise Zones

Land Use		Suggested Land Use Compatibility						
		Noise Zone 1 (DNL or CNEL)		Noise Zone 2 (DNL or CNEL)		Noise Zone 3 (DNL or CNEL)		
SLUCM NO	LAND USE NAME	< 55	55–64	65–69	70–74	75–79	80–84	85+
	Residential							
11	Household units	Y	Y ¹	N ¹	N ¹	N	N	N
11.11	Single units: detached	Y	Y ¹	N ¹	N ¹	N	N	N
11.12	Single units: semidetached	Y	Y ¹	N ¹	N ¹	N	N	N
11.13	Single units: attached row	Y	Y ¹	N ¹	N ¹	N	N	N
11.21	Two units: side-by-side	Y	Y ¹	N ¹	N ¹	N	N	N
11.22	Two units: one above the other	Y	Y ¹	N ¹	N ¹	N	N	N
11.31	Apartments: walk-up	Y	Y ¹	N ¹	N ¹	N	N	N
11.32	Apartments: elevator	Y	Y ¹	N ¹	N ¹	N	N	N
12	Group quarters	Y	Y ¹	N ¹	N ¹	N	N	N
13	Residential hotels	Y	Y ¹	N ¹	N ¹	N	N	N
14	Mobile home parks or courts	Y	Y ¹	N	N	N	N	N
15	Transient lodgings	Y	Y ¹	N ¹	N ¹	N ¹	N	N
16	Other residential	Y	Y ¹	N ¹	N ¹	N	N	N
20	Manufacturing							
21	Food and kindred products; manufacturing	Y	Y	Y	Y ²	Y ³	Y ⁴	N
22	Textile mill products; manufacturing	Y	Y	Y	Y ²	Y ³	Y ⁴	N
23	Apparel and other finished products; products made from fabrics, leather, and similar materials; manufacturing	Y	Y	Y	Y ²	Y ³	Y ⁴	N
24	Lumber and wood products (except furniture); manufacturing	Y	Y	Y	Y ²	Y ³	Y ⁴	N
25	Furniture and fixtures; manufacturing	Y	Y	Y	Y ²	Y ³	Y ⁴	N
26	Paper and allied products; manufacturing	Y	Y	Y	Y ²	Y ³	Y ⁴	N
27	Printing, publishing, and allied industries	Y	Y	Y	Y ²	Y ³	Y ⁴	N
28	Chemicals and allied products; manufacturing	Y	Y	Y	Y ²	Y ³	Y ⁴	N
29	Petroleum refining and related industries	Y	Y	Y	Y ²	Y ³	Y ⁴	N

(Continued on next page)

Table C-1 Suggested Land Use Compatibility in Noise Zones (Continued)

Land Use		Suggested Land Use Compatibility						
		Noise Zone 1 (DNL or CNEL)		Noise Zone 2 (DNL or CNEL)		Noise Zone 3 (DNL or CNEL)		
SLUCM NO	LAND USE NAME	< 55	55–64	65–69	70–74	75–79	80–84	85+
30	<i>Manufacturing (continued)</i>							
31	Rubber and misc. plastic products; manufacturing	Y	Y	Y	Y ²	Y ³	Y ⁴	N
32	Stone, clay, and glass products; manufacturing	Y	Y	Y	Y ²	Y ³	Y ⁴	N
33	Primary metal products; manufacturing	Y	Y	Y	Y ²	Y ³	Y ⁴	N
34	Fabricated metal products; manufacturing	Y	Y	Y	Y ²	Y ³	Y ⁴	N
35	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks	Y	Y	Y	25	30	N	N
39	Miscellaneous manufacturing	Y	Y	Y	Y ²	Y ³	Y ⁴	N
40	<i>Transportation, communication, and utilities</i>							
41	Railroad, rapid rail transit, and street railway transportation	Y	Y	Y	Y ²	Y ³	Y ⁴	N
42	Motor vehicle transportation	Y	Y	Y	Y ²	Y ³	Y ⁴	N
43	Aircraft transportation	Y	Y	Y	Y ²	Y ³	Y ⁴	N
44	Marine craft transportation	Y	Y	Y	Y ²	Y ³	Y ⁴	N
45	Highway and street right-of-way	Y	Y	Y	Y ²	Y ³	Y ⁴	N
46	Automobile parking	Y	Y	Y	Y ²	Y ³	Y ⁴	N
47	Communication	Y	Y	Y	25 ⁵	30 ⁵	N	N
48	Utilities	Y	Y	Y	Y ²	Y ³	Y ⁴	N
49	Other transportation, communication, and utilities	Y	Y	Y	25 ⁵	30 ⁵	N	N
50	<i>Trade</i>							
51	Wholesale trade	Y	Y	Y	Y ²	Y ³	Y ⁴	N
52	Retail trade—building materials, hardware and farm equipment	Y	Y	Y	Y ²	Y ³	Y ⁴	N
53	Retail trade—shopping centers	Y	Y	Y	25	30	N	N
54	Retail trade—food	Y	Y	Y	25	30	N	N

(Continued on next page)

Table C-1 Suggested Land Use Compatibility in Noise Zones (Continued)

Land Use		Suggested Land Use Compatibility						
		Noise Zone 1 (DNL or CNEL)		Noise Zone 2 (DNL or CNEL)		Noise Zone 3 (DNL or CNEL)		
SLUCM NO	LAND USE NAME	< 55	55–64	65–69	70–74	75–79	80–84	85+
50	<i>Trade (Continued)</i>							
55	Retail trade—automotive, marine craft, aircraft and accessories	Y	Y	Y	25	30	N	N
56	Retail trade—apparel and accessories	Y	Y	Y	25	30	N	N
57	Retail trade—furniture, home furnishings and equipment	Y	Y	Y	25	30	N	N
58	Retail trade—eating and drinking establishments	Y	Y	Y	25	30	N	N
59	Other retail trade	Y	Y	Y	25	30	N	N
60	<i>Services</i>							
61	Finance, insurance, and real estate services	Y	Y	Y	25	30	N	N
62	Personal services	Y	Y	Y	25	30	N	N
62.4	Cemeteries	Y	Y	Y	Y ²	Y ³	Y ^{4,11}	Y ^{6,11}
63	Business services	Y	Y	Y	25	30	N	N
63.7	Warehousing and storage	Y	Y	Y	Y ²	Y ³	Y ⁴	N
64	Repair services	Y	Y	Y	Y ²	Y ³	Y ⁴	N
65	Professional services	Y	Y	Y	25	30	N	N
65.1	Hospitals, other medical facilities	Y	Y ¹	25	30	N	N	N
65.16	Nursing homes	Y	Y	N ¹	N ¹	N	N	N
66	Contract construction services	Y	Y	Y	25	30	N	N
67	Government services	Y	Y ¹	Y ¹	25	30	N	N
68	Educational services	Y	Y ¹	25	30	N	N	N
69	Miscellaneous	Y	Y	Y	25	30	N	N
70	<i>Cultural, entertainment, and recreational</i>							
71	Cultural activities (churches)	Y	Y ¹	25	30	N	N	N
71.2	Nature exhibits	Y	Y ¹	Y ¹	N	N	N	N
72	Public assembly	Y	Y ¹	Y	N	N	N	N
72.1	Auditoriums, concert halls	Y	Y	25	30	N	N	N
72.11	Outdoor music shells, amphitheaters	Y	Y ¹	N	N	N	N	N
72.2	Outdoor sports arenas, spectator sports	Y	Y	Y ⁷	Y ⁷	N	N	N
73	Amusements	Y	Y	Y	Y	N	N	N
74	Recreational activities (golf courses, riding stables, water recreation)	Y	Y ¹	Y ¹	25	30	N	N
75	Resorts and group camps	Y	Y ¹	Y ¹	Y ¹	N	N	N
76	Parks	Y	Y ¹	Y ¹	Y ¹	N	N	N
79	Other cultural, entertainment, and recreation facilities	Y	Y ¹	Y ¹	Y ¹	N	N	N

(Continued on next page)

Table C-1 Suggested Land Use Compatibility in Noise Zones (Concluded)

Land Use		Suggested Land Use Compatibility						
		Noise Zone 1 (DNL or CNEL)		Noise Zone 2 (DNL or CNEL)		Noise Zone 3 (DNL or CNEL)		
SLUCM NO	LAND USE NAME	< 55	55–64	65–69	70–74	75–79	80–84	85+
80	<i>Resource production and extraction</i>							
81	Agriculture (except livestock)	Y	Y	Y ⁸	Y ⁹	Y ¹⁰	Y ^{10,11}	Y ^{10,11}
81.5	Livestock farming	Y	Y	Y ⁸	Y ⁹	N	N	N
81.7	Animal breeding	Y	Y	Y ⁸	Y ⁹	N	N	N
82	Agriculture-related activities	Y	Y	Y ⁸	Y ⁹	Y ¹⁰	Y ^{10,11}	Y ^{10,11}
83	Forestry activities	Y	Y	Y ⁸	Y ⁹	Y ¹⁰	Y ^{10,11}	Y ^{10,11}
84	Fishing activities	Y	Y	Y	Y	Y	Y	Y
85	Mining activities	Y	Y	Y	Y	Y	Y	Y
89	Other resource production or extraction	Y	Y	Y	Y	Y	Y	Y

Key:

SLUCM Standard Land Use Coding Manual, U.S. Department of Transportation.

Y (Yes) Land use and related structures compatible without restrictions.

N (No) Land use and related structures are not compatible and should be prohibited.

Y* (Yes with Restrictions) Land use and related structures are generally compatible. However, see note(s) indicated by the superscript.

N* (No with Exceptions) Land use and related structures are generally incompatible. However, see notes indicated by the superscript.

NLR Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

25, 30, or 35 The numbers refer to NLR levels. Land use and related structures generally are compatible; however, measures to achieve NLR of 25, 30, or 35 must be incorporated into design and construction of structures. Measures to achieve an overall noise reduction do not necessarily solve noise difficulties outside the structure, and additional evaluation is warranted. Also, see notes indicated by superscripts where they appear with one of these numbers.

DNL Day Night Average Sound Level.

CNEL Community Noise Equivalent Level (Normally within a very small decibel difference of DNL).

Ldn Mathematical symbol for DNL.

Notes:

1.

a) Although local conditions regarding the need for housing may require residential use in these zones, residential use is discouraged in DNL 65–69 and strongly discouraged in DNL 70–74. The absence of viable alternative development options should be determined and an evaluation should be conducted locally prior to local approvals, indicating that a demonstrated community need for the residential use would not be met if development were prohibited in these zones.

b) Where the community determines that these uses must be allowed, measures to achieve an outdoor to indoor NLR of at least 25 dB in DNL 65–69 and NLR of 30 dB in DNL 70–74 should be incorporated into building

codes and be in individual approvals; for transient housing, an NLR of at least 35 dB should be incorporated in DNL 75–79.

c) Normal permanent construction can be expected to provide an NLR of 20 dB; thus, the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation, upgraded Sound Transmission Class (STC) ratings in windows and doors and closed windows year-round. Additional consideration should be given to modifying NLR levels based on peak noise levels or vibrations.

d) NLR criteria will not eliminate outdoor noise problems. However, building location and site planning, design, and use of berms and barriers can help mitigate outdoor noise exposure, particularly from ground-level sources. Measures that reduce noise at a site should be used wherever practical in preference to measures that protect only interior spaces.

Notes (Continued):

2. Measures to achieve NLR of 25 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
3. Measures to achieve NLR of 30 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
4. Measures to achieve NLR of 35 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
5. If project or proposed development is noise sensitive, use indicated NLR; if not, land use is compatible without NLR.
6. No buildings.
7. Land use compatible provided special sound reinforcement systems are installed.
8. Residential buildings require NLR of 25.
9. Residential buildings require NLR of 30.
10. Residential buildings not permitted.
11. Land use not recommended, but if community decides use is necessary, hearing protection devices should be worn.

Source:

OPNAVINST 11010.36B, 2002.

Table C-2 Suggested Land Use Compatibility in Range Safety Zones

Land Use	Range Safety Zones		
	A	B	C
Residential — Single Family, Duplex, Mobile Homes			3
Residential — Multiple Family			5
Transient Lodging			5
School Classrooms, Libraries, Churches			5
Hospitals, Nursing Homes			5
Auditoriums, Concert Halls			2
Office Buildings — Personal Business, Professional			
Commercial, Retail, Manufacturing, Utilities			
Playgrounds, Neighborhood Parks			2
Golf Courses, Riding Stables, Water Recreation, Cemeteries		4	
Outdoor Spectator Sports			2
Industrial, Warehouse, Supplies			
Livestock, Farming, Animal Breeding		1	
Agriculture (Except Livestock), Mining, Fishing		1	
Recreational, Wilderness Area		2	2

Notes:

1. RSZ B is an area of armed overflight. Land uses that have the potential to attract congregations of people are not compatible. For scored targets, no development should be permitted within 500 feet either side of the run-in centerline. For tactical targets, further analysis is required. Factors to be considered are labor intensity and structural coverage.
2. Incompatible when the training mission requires low-altitude overflight (below 500 feet). Height of structures is limited to 50 feet.
3. Suggested maximum density in RSZ C is less than one dwelling unit per 10 acres.
4. Clubhouses, chapels, and other facilities where people congregate are not compatible with RSZ B.
5. Noise-sensitive uses should be avoided.

	Incompatible
	Conditionally Compatible
	Compatible

D. UDA County-wide Acreage Needs

This table represents the minimum acreage that Stafford County would need to designate for Urban Development Areas based on a generalized county-wide evaluation given the alternatives that provide varying degrees of development intensity. This information is based on the methodology presented during a session on Urban Development Areas at the 2010 CPEAV Zoning Law Seminar on July 23, 2010 in Charlottesville, Virginia

Land Use	UDA Alternatives		
	Low Density Alternative	Medium/Mixed Densities	High Density
	All Single Family Dwellings (14,661)	1/3 Single Family, 1/3 Townhouse, 1/3 Multi-family (4,887 units each)	All Multi-family Dwellings (14,661)
	Acres	Acres	Acres
Residential	3,665	2,443	1,222
Commercial/Employment	574	574	574
Total	4,239	3,017	1,796

Note: The ultimate area should be adjusted to account for public land and right of way.

Assumptions

10-year projections (2010 - 2020):

40,904 new residents

14,661 dwelling units (revised estimate, as of August 12, 2010)

Commercial / Employment based on County estimate of 1 million square feet of floor area per year, or 10 million square feet over 10 years.

Conversion to acreage: $10,000,000 / 0.4 \text{ (FAR)} / 43,560 \text{ (sq ft/ac)} = 573.92 \sim 574 \text{ Acres}$

Densities:

Single Family: 4 du/acre

Townhouse: 6 du/acre

Multi-family: 12 du/ac

E. Affordable Housing Study

***(Presented to the Comprehensive Plan Steering Committee
on September 25, 2006)(updated June 2010)***

Introduction: Affordable Housing

Affordable Housing (Workforce Housing) is safe, decent housing where costs (mortgage or rent plus utilities) does not exceed 30 % of gross household income. One quarter of middle class Americans exceed this amount. (HUD)

Workforce: 50% to 120% of median family income (\$89,536 in Stafford County) therefore: \$44,768 to \$107,443 (2008)

Homeownership expands individual opportunities to accumulate wealth, enables a family to exert greater control over its living environment, creates incentives for households to better maintain their homes, and may benefit children of homeowners. Homeownership also benefits local neighborhoods because owner-occupiers have a financial stake in the quality of the local community. (HUD 2005)

Communities that have had success producing more Affordable Housing have developed the attitude that Affordable Housing is part of the Economic Development Infrastructure. It is more than just a quality of life issue. Citizens who work in the communities where they live spend more of their incomes in their communities thus dramatically increasing tax revenues for their localities.

In virtually all communities nationwide, the magnitude of the housing need is likely to dwarf available resources. (The Brookings Institution, 2003)

Special Challenges of Low Income Housing:

Fact: Someone who makes the current minimum wage of \$5.15 per hour and allocates no more than 30% of annual income for housing should not have to pay more than \$257.50 per month in rent and utilities. The average monthly cost of a reserved parking space in downtown Washington, D.C., is \$280. (Designing An American Asset 2004)

Over two million workers in America earn minimum wage or less. (U.S. Department of Labor, 2004)

In the suburbs, local governments are politically dominated by homeowners, who comprise a majority of residents and are the most vocal. The major asset of most homeowners is their home. They have strong incentives to want the market values

of homes to rise. So they oppose any policies they believe might reduce home values. They think letting more affordable units into their communities would do that and might also lower the quality of local schools and raise property taxes. So very few want to permit new low-cost housing near them, or to accept low-income neighbors. (Brookings Institution, 2003)

Rationale for Creating Affordable Housing:

Families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care. An estimated 12 million renter and homeowner households now pay more than 50 percent of their annual incomes for housing, and a family with one full-time worker earning the minimum wage cannot afford the local fair-market rent for a two-bedroom apartment anywhere in the United States. (HUD) (2006)

Everyone needs a place to live, regardless of age, job, race, disability, income or station in life. Although housing has often been cast as a "social" issue, it is in fact a broader concern, cutting across many disciplines, including economics, social work, and public health, in addition to urban planning. A 1999 report by the U.S. Department of Housing and Urban Development (HUD) finds that "despite six years of unprecedented economic growth, millions of families still struggle to secure decent affordable housing." The report goes on to relate how more Americans than ever before find themselves in "worst-case" housing situations, paying more than half their incomes for rent, or occupying unsafe or overcrowded dwellings. Of over 12.5 million persons with worst case needs, nearly 1.5 million are elderly and 4.5 million are children, according to the HUD report. Another 1.1 to 1.4 million worst case households includes adults who experience disabilities. (American Planning Association, 1999)

Trends in Federal Funding:

Despite recent increases in Congressional appropriations to HUD, the past two decades have seen significant erosion of federal commitment to the development of affordable housing. Evidence of this retreat can be clearly seen in decreasing funding for development subsidies, curtailment of project-based rental subsidies, and repeal of tax incentives for affordable housing, and a dwindling supply of housing affordable to many working families. Ironically, the economic growth of recent years has contributed to the housing pinch. HUD cites the strong economy as "...a key factor (in) pushing rent levels to new record highs. Rather than benefiting from the surging economy, low-income renters are left to compete for the dwindling supply of affordable housing available on the private market. Many of the most vulnerable low-income renters spend years waiting in vain to obtain needed rental housing assistance in the form of housing vouchers or public housing units." At the same time, Federal housing policy has undergone what HUD terms an "historic reversal", by placing a freeze on new housing vouchers, the principal form

of assistance that allows low-income renters to access privately owned housing. (American Planning Association, 1999)

State and Community Trends:

The Federal government has shifted more of the burden for Affordable Housing without adequate funding.

Just since the year 2000, U.S. house prices have increased more than twice as fast as the growth of personal income. (Richard F. Syron Chairman and CEO, Freddie Mac, 2005)

Many communities are suffering from their own success. They have succeeded in attracting employers and jobs, but regulatory barriers, public opposition to multifamily housing, and land use policies have prevented developers from adding enough supply to keep up with the growing demand for housing. (Joint Center for Housing of Harvard University, 2005)

Consequences of Affordable Housing Shortages:

A common measure of community-wide affordability is the number of homes that a household with a certain percentage of median income can afford. For example, a community might track the percentage of its housing that is affordable to households earning 60% of median income. In addition to the distress it causes families who cannot easily find a place to live, lack of affordable housing is considered by many urban planners to have negative effects on a community's overall health.

Demographics:

As of 2004, the white homeownership rate was 76 percent while African-American and Hispanic homeownership rates remained below 50 percent, and the Asian rate was 60 percent. At the same time households with very-low income had a homeownership rate that was 37 percentage points below the rate for high-income households. (HUD 2005)

Implications for Affordable Housing initiatives:

Affordable housing is the hardest form of real estate to make viable in the long run, because it maintains a dual mission: (1) be financially healthy, and (2) provide affordability to low income residents. These two goals are diametrically opposite — almost every decision involves trading one off against another.

To be viable at both missions, affordable housing requires the injection of government financial resources to fill the gap between what the market requires for

quality, and what poor people can afford. It is a mistake to start an affordable housing initiative with too little government resource — all the financial wizardry imaginable may disguise but will not prevent its inevitable, and expensive, failure. (Affordable Housing Institute, 2006)

Federal Programs for Low and Affordable Housing:

- Low Income Housing Tax Credits (LIHTCs) and Historic Tax Credits
- HUD/FHA multifamily loans insured under all applicable sections of the National Housing Act
- HUD's Section 8 rental assistance programs
- Public housing, including privatization and revitalization of public housing under HUD's HOPE VI and mixed finance programs
- Tax-exempt bonds for housing and community development
- Representing local, regional and national non-profit developers, lenders and intermediaries in connection with acquisition, development, management and financing of housing projects
- Fannie Mae and Freddie Mac multifamily loan and investment programs
- Community and economic development programs, including Community Development Block Grants (CDBG) and related Section 108 and Economic Development Initiative programs, as well as Empowerment Zones and Enterprise Communities

Housing assistance from the federal government for lower income households can be divided into three parts.

- "Tenant based" subsidies given to an individual household, known as the Section 8 program
- "Project based" subsidies given to the owner of housing units that must be rented to lower income households at affordable rates, and
- Public Housing, which is usually owned and operated by the government. (Some public housing projects are managed by subcontracted private agencies.)

Sample Stafford County Employee Salaries (2010):

24 hr - Fire & Rescue Technician I - average salary: \$42,086 for 7 employees - **Grade A06; min \$38,480 mid \$48,089 max \$59,663**

Deputy Sheriff I - Field Operations - average salary: \$39,600 for 61 employees - **Grade A05; min \$34,985 mid \$43,721 max \$54,204**

Administrative Assistant - average salary: \$27,319 for 5 employees - **Grade A01; min \$24,377 mid \$29,868 max \$40,227**

Human Resources Analyst - average salary: \$49,973 for 3 employees - **Grade A07; min \$41,496 mid \$52,894 max \$64,313**

Parks Maintenance Worker I - average salary: \$37,716 for 3 employees - **Grade A01; min \$24,377 mid \$29,868 max \$40,227**

First Year Teacher: \$36,322, Teacher with ten years experience: \$46,269

NOTE: All salaries are for full-time employees

Market Trends: Stafford County Home Costs (2009)

Average Sold Price - \$244,769

- 17% decrease from 2008

Median Sold Price - \$229,000

- 16.1% decrease from 2008

Average days on the market - 89

- 28.8% decrease from 2008

Breakdown of sample house costs in Stafford County (2006):

Below is an example of a Closing Cost estimate to help you understand what these fees cover when you buy a home in Stafford County, Virginia.
Source: Stafford County Real Estate – Homefinders.com

PRICE OF HOME	\$350,000
LOAN TYPE	Conventional
LOAN TERM	5 years
AMORTIZATION	30 years
DOWN PAYMENT (5%)	17,500
LOAN AMOUNT	332,500
INTEREST RATE	5.75%
REAL ESTATE TAXES	1,700
EARNEST MONEY DEPOSIT	3,000
LOAN RELATED FEES	
Appraisal Fee	\$350
Credit Report Fee	60
Misc. Lender Fees	500
Tax Service Fee	75
Flood determination	11
PREPAIDS OR ESCROW ITEMS	
Prepaid Interest (Per Diem)	\$970 (15 days)
Hazard Insurance (1 year)	450
Hazard Insurance Escrow	75
Prepaid RE Taxes (4 months)	566
PMI not included, available in mortgage	
TITLE CHARGES	
Settlement Fee (legal)	650
Title Insurance	(\$5.30 per \$1,000 approx.)
(includes lender and owner)	1855
GOVERNMENT RECORDING AND TRANSFER FEES	
Recording Fees	100
City/County/State Tax	approx 1855
Stamps	
ADDITIONAL SETTLEMENT FEES	
Survey	275

Pest Inspection	50
TOTAL CLOSING COSTS	\$ 8,987
DOWN PAYMENT (10%)	\$17,500
TOTAL MONEY NEED TO BUY	\$26,487
LESS EARNEST MONEY DEPOSIT OF	3,000
CASH NEEDED AT SETTLEMENT	\$23,487

Cash from the buyer at settlement is by Bank Check, Wired Funds or other certified funds. Personal checks will not be accepted by the tile company because they cannot record a deed unless they have the funds on deposit.

ESTIMATED MONTHLY PAYMENT

Principal & Interest	\$1,838 @ 5.75%
1 Month RE Taxes	141
1 Month Hazard Insurance (\$804 annum)	38
MONTHLY PAYMENTS	\$2,017

All financial information is estimated and may vary from buyer to buyer based on PMI, Interest rates, Insurance, lender fees and other actual costs

What Other Communities Have Done To Address the Problem:

1. Affordable Housing Ordinance - requires a percentage of new development to include affordable housing units. This ordinance must include incentives for developers or it actually increases the cost of housing instead of reducing it.
2. Forgive cash proffers on affordable housing units
3. Density bonus for developments that include a pre-determined number of Affordable Housing Units
4. Cash Proffers for Affordable Housing for Rezoning
5. Dedicating One Cent from Property Taxes to Address Funding of Affordable Housing
6. Participate in Partnerships with Business Community and Other Stakeholders to establish a non-profit entity to purchase and manage sale of affordable housing units
7. Use of County-Owned Surplus Land to Contribute to Affordable Housing Units
8. Seek Major Employer Contributions to Affordable Housing Fund
9. Determine the number of Affordable Housing Units currently in the community and take steps to conserve those units.
10. Set up Affordable Housing Taskforce with community stakeholders to determine what steps listed above will work for locality.

F. Public Input Summary

Introduction

This section of the Plan summarizes the various public input techniques used for the Stafford County Comprehensive Plan. The public input process for the Stafford Comprehensive Plan included “vision sessions” held with staff and directors, the Steering Committee and the Planning Commission; focus groups, small groups brought together by invitation to discuss particular elements of the Plan; public workshops and a community survey randomly distributed to residents of the Stafford County.

A more detailed account of the public input received during the Plan process is in the Public Input document which is a companion volume to the Comprehensive Plan.

1.1 Vision Sessions

1.1.1 Staff and Directors

Staff and directors gathered on March 23, 2006 for a Vision Session with the consultant facilitating. A number of additional staff members who were unable to attend the March 23 meeting submitted their written responses at a later date.

Staff and directors see Stafford as a fast-growing place that is rapidly evolving. They see its identity at risk, “a mix of old and new” that is “politically divided as to how to deal with inevitable growth.” “We want growth, but we want to discourage it and what comes with it,” one writer responded. They see the County struggling to meet its obligations and the demands of its residents.

If there were no constraints, including time and money, staff and directors see a Stafford County 20 years from now that has overcome its struggle with growth and that successfully preserves its rural character while accommodating growth. They see a well-planned transportation system and a mix of office oriented employment, commercial development and “top quality development.” They see a sustainable community, “a balance of green and commercial,” “THE model for fast-growing communities around the state.”

Stafford’s top strengths are its location, schools and people. Its proximity to the nation’s capital and to Richmond, access to waterways, I-95 and proximity to the Quantico Marine Corps base and its natural beauty and diverse physical environment were all mentioned specifically.

Stafford’s most important constraints, according to the staff and directors, are its issues related to growth and traffic congestion, funding and budgeting issues and systemic issues such as state laws, Dillon’s Rule, “no at-large representation,” “political discord” and lack of a long-range vision were all specifically noted.

At the end of the sessions, participants were asked to list the issues they felt were important to raise. Their responses included the need for public, government, staff and rural landowners “buy in” on the Comprehensive Plan. Staff and directors are not all completely optimistic about the future: “There is an opportunity to create a place,” wrote one participant, but another said, “there is no Stafford.” Another noted a fundamental disconnect in development: “There is a great divide between long-time residents and newcomers; rural landowners want to stop growth but still want to be able to develop their land.” Participants also raised the cost of living in Stafford, with one noting: “I can count on one hand the number of my staff who can (afford to) live in here.”

1.1.2 Steering Committee

The Comprehensive Plan Steering Committee met for a Vision Session on April 17, 2006 with an outside consultant facilitating. The Steering Committee members were posed questions identical to those asked of the staff and directors.

When asked to describe Stafford County, many of the participants used words that indicate change: suburbanizing, transforming, growing and changing. Stafford is “a community of change,” wrote one respondent. “Growing too fast,” wrote another. Several mentioned the County’s cultural, historic and natural resources. Stafford is “a community of change transforming from a rural to an urban to a suburban community. The rate of change is causing difficulties,” wrote on participant.

When asked for their visions of the future of Stafford, barring all constraints including time and money, the Steering Committee members described a place boasting a clean environment with open space, town centers and diversity in terms of tax base and demographics. A “tax structure that will allow young and old to live here,” wrote one participant. “Affordable for all income levels,” wrote another.

When asked to identify the County’s top strengths, most participants responded in terms of opportunities and no clear consensus emerged on either side. Those who identified strengths identified the County’s location, natural resources and its educated population as strengths. The opportunity to improve the transportation system was cited among important opportunities for the County, as were the potential to design areas before subdividing them, bring more jobs to the County and to “harness growth properly.”

The leading constraints or obstacles facing the County the Steering Committee members identified were mostly related to growth and change: transportation, the County’s increasing population and the transient nature of the population, lack of resources to address problems and affordable housing. Steering Committee members also identified the lack of tools for coping with the rate of change as constraints. Stafford residents “haven’t reoriented and readjusted to the changing nature of Stafford – still operating and thinking as a rural county,” wrote one member. “(The) governing tools we have are of a rural county and many times we can’t address areas like Garrisonville Road. If we are a city, we can build our own

roads, etc.," wrote another. "Not being given the legislative tools to address our own problems," wrote a third.

Issues the committee members identified were so-called "big picture" items: climate change and global warming, to regional issues like regional planning, and more local issues such as the Outer or Leesburg connector, preservation of the County's rural character and the need for public input as part of the planning process.

1.1.3 Planning Commission

A Vision Session was held with the Planning Commission on July 17, 2006 with the outside consultant facilitating. The Commission members were asked questions identical to those asked of the Steering Committee and the staff and directors.

Planning Commission members' opinions of the character of Stafford were varied and seemed to depend somewhat on the character – or lack of it – of their own neighborhood. "In my neighborhood, I know everyone," wrote one. But another said, "my neighbors know more about Jerry Seinfeld than (they do about) me." Many responses noted the lack (or loss) of a sense of place in Stafford. "There's no sense of place," wrote one. "You don't tell people what town you live in, you tell them what subdivision or street." One Commission member summed up the divergent opinions well: "Rural, urban suburban with no sense of place; beautiful historical place growing like topsy."

Planning Commission members' visions for Stafford include a sustainable Stafford with rural and suburban areas. "Anyone that wants to live here will find some living space that fits their wants and needs," wrote one. They envision more local employment and protection of the County's historic, cultural and natural resources. But one Commission member noted expectations and visions may not align: "Having participated in these sessions for some 18 years, I expect we'll look a lot like Fairfax County."

Stafford's most important assets include its location, including specific sites like Government Island, Crows Nest and Marlborough Point, as well as its location vis a vis the Washington, DC and along the northeast corridor. Other assets are its schools, its population and its history and culture.

As with the previous sessions, Stafford's Planning Commissioners cites transportation as the most important constraint facing the County. Budget constraints and taxes were also cited as constraints.

Equity was a theme of other issues the Planning Commissioners raised as was the need for personal involvement and investment in the community. In terms of equity, Commission members saw a need for more affordable housing and a more equitable approach to land use that would allow for preservation as well as development and open space. "People forget that you don't start out with a

\$500,000 house when you're just barely making it," said one. "Where is our open space going to be," asked another.

Throughout the session, the Commission members engaged in a brief but lively side discussion about public input for the Comprehensive Plan: The need for the public's input and the likelihood they wouldn't get as much as they wish for unless there was a clear threat or issue. "How do you get people to care? Asked one Commission member, "I wish I could answer that."

1.2 Focus Groups

There were three Focus Group sessions held as part of the planning process. Focus Groups are much like the Vision Sessions – they are facilitated discussions on a limited number of questions. The questions posed to the Focus Group participants were much like those employed during the Vision Sessions. With the help of the Steering Committee, participants were identified for each group, and they were invited to sessions held on July 18, 2006.

1.2.1 Economic Development and Housing

There were six participants at the Economic Development and Housing Focus Group out of 38 identified invitees and 17 who indicated they would attend.

Like participants in the Vision Sessions, the Economic Development and Housing Focus Group Participants characterized Stafford as a place undergoing transformation. Stafford is "a community undergoing major transitions that are largely due to circumstances beyond its control," wrote one participant. "Properly managed growth is the challenge," wrote another. "Stopping growth is not an option and the problems of growth are better than the problems of no growth."

The participants were asked what should be the County's economic development and housing focus over the next 20 years. They cited the need for an improved transportation system in the County, including the widening of smaller two-lane roads to make them safer; defining areas of the County for growth and open and preservation, including implementing the transfer of development rights; and economic development focus on recruiting jobs at a variety of levels and the housing to accommodate those workers.

"Lower the growth rate in some areas of the County," said one participant. "Focus on economic development that contributes more to the County than costs the County," said another. Transfer of development rights "doesn't devalue the farmer's land" said another participant, since the density credits can be applied in a growth area.

When asked to name the most important opportunities or potentials for economic development and housing in Stafford, the group mentioned making the most of being a bedroom community for Washington, DC and developing appropriate transportations hubs, rail capacity and mixed-use town centers. Other potentials

included promoting economic development efforts that would recruit more jobs to Stafford and developing the Widewater area.

"Growth is looked at as a negative and it's an opportunity," said one. "People are wanting to come here ... preserve what the people who come here like and the reasons people are coming here." There are "realities that need to be acknowledged," said another. "People travel to DC because jobs are tied to Capitol Hill. Instead of moving jobs to Stafford, make it a unique bedroom community rather than cover it with McMansions." But another disagreed: "bringing jobs here and keeping families here will be the more dramatic impacts Stafford would enjoy. People here are recruited to Washington – reverse the situation."

Local government decision-making, the ability to effectively manage growth and land use issues were among the top challenges the group listed. They said that decision-making is hamstrung locally partly because supervisors do not run at large as well as regionally. Transportation solutions they suggested included the potential for tolls roads, atoll bridge over the Rappahannock, a car tax and fuel tax increases.

When asked to name additional issues they felt are important to the Comprehensive Planning process, the group reiterated many of the potentials and challenges already raised. Among the issues they raised were a perceived undue influence of the development community on planning in Stafford, the need for affordable housing and the need for environmental protection.

1.2.2 Environment, Parks and Culture

There were 13 participants in the Environment, Parks and Culture Focus Group out of 41 identified invitees and 24 who indicated they would attend.

Stafford's unique historic, cultural and natural resources are central defining features of its character, but its rapid growth is threatening that character. Stafford is "evolving from mostly rural to become a residential community and as a result having growing pains, rising land costs, development issues and difficult traffic problems," said one participant. "Stafford is a county with a rich history, extensive cultural resources, high quality environmental resources faced with the challenges of maintaining those resources in the face of rapid growth," said another.

Participants suggested that the environment, parks and culture focus of the County over the next 20 years include inventory, protection and interpretation of the County's historic, cultural and natural resources including its waterways, acquiring parks and open spaces and environmental protection.

The opportunities the group sees for environment, parks and culture preservation of the Rappahannock and Potomac rivers, Crow's Nest, streams and other waterways, as well as recreation initiatives such as lighted soccer fields and a Stafford sports park. They also suggested cooperation and coordination with state and federal agencies to protect and preserve historic, cultural and natural resources. "Use our history wisely," one suggested. "People will come to visit the important sites of we

promote them adequately, such as the Falmouth Historic District.” Buy land now; it will be more expensive later,” said another.

A lack of funding, understanding, personnel and existing land use regulations are some of the main threats to the County’s environment, parks and culture, the group said. One cited outdated zoning in particular: “we weren’t thinking about strip malls 20 years ago. Now we have a ton of strip malls.” Another said, “lack of pre-identified list of sites and resources the County agrees it wants to preserve is a main threat.”

Additional issues participants cited as important to the planning process included concern that the County is underfunded and understaffed to address important issues, that a commuter and military culture have eroded community understanding and ownership, need for public transportation, trails and bike paths and conservation and protection of critical areas.

One participant accused the County of acting in its own self interest to the detriment to of resident. “Many long-time residents have been forced to move due to taxes rising and housing costs,” the participant said. Another said: “We have discussed what needs to be acquired/preserved, but I believe individual property rights must be considered and respected.”

1.2.3 Transportation and Community Services

There were 13 participants in the Transportation and Community Services Focus Group out of 34 identified invitees and 21 who indicated they would attend.

Like participants in the other two Focus Groups and Vision Sessions participants, the Transportation and Community Services Focus Group participants identified the County’s growth as among its characteristic features. Unlike the others, however, members of this group see Stafford as becoming integral part of the National Capital Region and that it is losing its identity to growth.

Stafford is “beginning to experience growth and urbanized development and merge into the DC region,” said one participant. Stafford is “another Loudoun County,” said another. Stafford “doesn’t have historic town centers, too big of a population to do that. (It) lacks focal points for people to come to do the things that create community and the old agricultural community is lost,” said a third participant. “(The) sense of community existed by default in the past,” said another. “But now we need a place.”

The main transportation and community services issues to be addressed over the next 20 years include road system deficiencies including the county’s outdated and dangerous road system, and the life of the landfill.

"Roads need to be updated, not necessarily changed," said one participant. While several agreed the narrow curving roads are a hazard, they didn't necessarily want to see them straightened out. One participant would "like to see the roads improved, but I don't want to see them changed. I like the curvy roads." Need for additional north/south and east/west routes were cited. "Transportation needs have been identified and documented many times," wrote a participant. "The remaining issue which has not been resolved is funding."

Transportation and community services opportunities that participants cited included increasing the numbers of roads and the capacities of existing roads but also public transportation, increased capacity on the Virginia Rail Express and FRED bus service. Participants also worry that the lack of affordable housing is making it difficult to recruit young people to live in the County to work as police officers and emergency medical technicians. "We've lost the service sector because there is not anyplace to live that they can afford," said one participant.

Participants see the threats to transportation and community services as a lack of planning and planned development resulting in sprawl and unmanaged growth, public apathy, affordability and loss of identity. One participant listed several of these issues, adding: "studying the things to death and not taking land preservation seriously."

Additional issues important to the Comprehensive Planning process listed by participants included the need to prioritize. One participant pointed out the need to recognize "that everything that needs to be done in the County may not get done, so there is a tremendous need to prioritize and stick to those priorities."

1.3 Survey Results

1.3.1 Introduction

The participation of residents in the Comprehensive Plan is important, as decisions made upon the completion of the Plan will have a direct effect on the lives of residents. A community survey was completed in Stafford County in June of 2006. The survey was intended to measure the public opinion with respect to various issues and conditions that exist in the community. In addition, the survey was intended to provide residents with the opportunity to state their visions and goals for the future of the community.

The survey questions were divided into the following sections: Community and Government Services, Community Identity and Design, Land Use, Culture and History, Environment, Recreation, Transportation and Circulation and Economy and Business Services. The survey also asked for some demographic data and other information about respondents including their ages, how long they have lived in Stafford, etc.

The survey was distributed randomly to a total of 670 households. A total of 128 surveys were returned completed, representing a response rate of 19%. An effort

was made to distribute the surveys proportionally between renters and homeowners. However, the response rate was much lower for renting households. A response rate of 19% is not generally considered excellent for a survey of this type although it is not unusual. Due to the size of the community, the sample size created by the number of people who responded to survey exhibits a margin of error of $8.6\pm\%$ with a confidence interval of 95%. The margin of error is based on a random sample.

While the survey was randomly distributed, the respondents generally are not a random representation of the County. With all mail-back surveys, there is a certain degree of sample bias, in that a segment of the population chooses not to respond. People who respond to this type of survey tend to be better educated and/or politically motivated. It should also be considered that those that responded to the survey have demonstrated a greater interest in the future of Stafford.

1.3.2 Survey Results: Summary

Community services and identity:

- 76% of responders agree that they feel safe in the county and 3% disagree
- 50% are satisfied with the cost of government services and 16% are not satisfied
- 23% agree that Stafford county is doing a sufficient job managing growth and 57% disagree

Land use:

- 73% agree that protecting open space from future development should be a priority and of those 50% strongly agree. 11% disagree.

Culture and History:

- 80% agree that that Stafford's historical legacy should be preserved and 7% disagree.
- 68% agree that the County should promote the attraction of cultural interests such as theater, music and art. 8% disagree.

Transportation and Circulation:

- 96.8% feel that traffic on Rt. 610 is a significant problem, and of those 82% strongly agree. 0% disagreed or strongly disagreed.
- 94.2% felt that the Rt.1/Rt. 17 intersection was a significant problem and of those 81% strongly agree. 0.8% disagree.
- Strong majorities felt that Rt 630, Rt. 17 and Rt1 1 are significant problems.
- Strong majorities ranging from 70% to 76% agree that the County should increase funding for things like sidewalks to connect neighborhoods, greenways, FRED, VRE.

- 83% agree that an alternate north-south route west of Rt. 95 is needed and 4% disagree.
- 78% agree that the county should explore options to divert traffic around major intersections. 12% disagreed.

Environment:

- 85% agree that protecting environmentally sensitive lands should be a priority. 4% disagree.
- 85% agree that development should be planned to preserve woodlands, forests and trees. 4% disagree.
- Majorities ranging from 37%-40% to 13%-24% believe that county is doing a sufficient job with erosion control, noise, light and air pollution.
- A small majority—35% disagree to 33% agree that the county is doing a sufficient job with litter control.

Recreation:

- 74% agree that more active recreation opportunities are required. 9% disagree.
- 62% agree that additional parks are needed. 12% disagree.

Economic and Business:

- 70% agree that Stafford should increase business development to generate additional taxes. 13% disagree.
- 81% agree that Stafford should adopt measures that allow rural landowners to preserve their land in its natural state. 6% disagree
- Note: 90% of responders own their own homes. 70% have lived in Stafford more than 5 years and 38% have lived here more than 15 years.

1.3.3 Survey Results: Community and Government Services

Survey respondents were first asked to indicate their overall satisfaction with community and government services on a scale of one to five from very satisfied to dissatisfied. Overall the survey respondents indicated a high level of satisfaction with their community and government services. More than 90 percent are at least satisfied with fire and rescue services and the sheriff's office; more than 80 percent of respondents were at least satisfied with the schools, parks and recreation and public communications.

Survey respondents were asked to indicate their level of agreement, also on a scale of one to five, on other community and government services issues. While 50 percent of respondents agreed or strongly agreed that they were knowledgeable about county services and offices, another 37 percent neither agreed nor disagreed that they were knowledgeable. Similarly, 50 percent of respondents indicated they agree or strongly agree that they are satisfied with the cost of government services

in Stafford. Another 34 percent neither agreed nor disagreed that they were satisfied with the cost of services. More than three-quarters of respondents agree or strongly agree that they feel safe in Stafford.

1.3.4 Survey Results: Community Identity and Design

Respondents to the survey are generally supportive of or ambivalent about development of all kinds with the distinct exception of residential development. Overall more than half of respondent strongly agree or agree that Stafford should encourage retail, light industrial/technical, office parks and multi-use town centers. Those neither agreeing nor disagreeing about the need for retail, light industrial/technical, office parks, residential and multi-use town centers were between 20 and 25 percent. The only marked difference among responses was in the attitude regarding residential development. While in all the other categories 20 to 22 percent either disagreed or strongly disagreed that development should be encouraged, 41 percent disagreed or strongly disagreed that residential development should be encouraged; 21 percent were ambivalent and 38 percent thought residential development should be encouraged.

There is also marked ambivalence about connectedness to community in Stafford – an issue that also came out in the Vision Sessions and Focus Groups. While 56 percent of respondents said they feel connected to Stafford and have a long-term commitment to the community, fully one-third neither agreed nor disagreed and the balance disagreed or strongly disagreed. These results somewhat mirror the responses to a question about the County’s sense of identity. More than one-third (37 percent) were ambivalent about the county’s sense of identity while 40 percent agreed or strong agreed it has a strong sense of identity.

The County is not doing a good job of managing growth, according to survey respondents, 58 percent of whom said they disagreed or strongly disagreed that the County is doing a sufficient job of managing growth. There were 23 percent affirmative responses and 19 percent were ambivalent. Of the growth that has already taken place, a larger proportion of respondents felt the character and aesthetics of the residentially built environment was pleasing (54 percent) than felt that way about the commercially built environment (46 percent).

1.3.5 Survey Results: Land Use

Stafford residents overwhelmingly want open space protected, according to the survey results. There were 73 percent affirmative responses asking if protecting open space from development should be a priority, while 15 percent of respondents were ambivalent on this issue. Nearly 50 percent of respondents disagreed that Stafford provides a broad range of housing types while 29 percent think sufficient diversity and affordability of housing types exist. A third of respondents are ambivalent about their familiarity with the County zoning code, and a little more than half are also ambivalent about the code’s effectiveness. At the same time, 43 percent admit they’re not familiar with the code. More than 50 percent of

respondents disagreed that the location and density of new residential development is appropriate.

1.3.6 Survey Results: Culture and History

An overwhelming majority (80 percent) of respondents agreed that the County's rich historic legacy should be preserved. At the same time, 49 percent agreed that they are familiar with the County's history and historic sites. There were 69 percent who agreed that the County should promote the attraction of cultural interests such as theater, music and art.

Satisfaction with library facilities was only fair, with 47 percent of respondents agreeing they are sufficient and 24 percent expressing ambivalence. Just 28 percent of respondents agreed that the County is reaching its tourism potential, and 35 percent disagreed.

1.3.7 Survey Results: Transportation and Circulation

Stafford residents are all for the County spending money on measures to mitigate traffic issues including sidewalks (73 percent), greenways (77 percent), FRED bus system (73 percent) and VRE (70 percent). Nearly two-thirds (64 percent) disagreed that the quality and safety of the road system is adequate for the current population and future growth and 59 percent agreed that pedestrian safety is an issue. Among roads that were named as significant problems in the survey 97 percent agreed that Garrisonville Road is a problem, followed by Falmouth Bridge (94 percent), Warrenton Road (89 percent), Jefferson Davis Highway (76 percent) and Courthouse Road (71 percent).

When asked to set three priorities for funding for over the next three to five years, respondents said Garrisonville Road, Falmouth Bridge and Warrenton Road should be the priorities. When asked where pedestrian safety is a problem in an open-ended questions, answers included "everywhere" as well as Garrisonville Road (21 responses), Warrenton Road (eight) and others.

Survey respondents also support an alternative route west of I-95 (83 percent agreed) and other options including toll roads, traffic mounds at intersections and diverting traffic around intersections (78 percent)

1.3.8 Survey Results: Environment

Survey respondents did not generally express much strong agreement that the county is doing a sufficient job of addressing erosion, noise pollution, light pollution, air pollution and litter control and more expressed ambivalence in these areas than agreement of disagreement. This suggests that the County's efforts to address pollution are not well known or understood. Similarly just over half (52 percent) neither agreed nor disagreed that appropriate steps are being taken to address pollution of surface and ground water resources. Majorities of respondents agreed that development should follow the contours of the land, that environmentally

sensitive lands should be protected and that development should be planned to preserve woodlots, forests and trees with more than half strongly agreeing that environmentally sensitive lands should be preserved (57 percent) and that forests and trees should be preserved (60 percent).

1.3.9 Survey Results: Recreation

Stafford residents are interested in participating in more active recreational activities, with 74 percent evenly split between agreeing and strongly agreeing that the County needs more of these activities such as hiking, biking, camping, boating, fishing, golf. When it comes to passive recreational activities, similar proportions of respondents agreed (41 percent) neither agreed nor disagreed that more passive recreational activities are needed. These include bird watching and nature watching. Almost half (48 percent) neither agreed nor disagreed that there is adequate waterfront access and a third (34 percent) disagreed that adequate access to waterfront exists. While just over a quarter (26 percent) of respondents neither agreed nor disagreed that parks are needed, but most of the remaining respondents (62 percent) agreed that more parks are needed.

When asked in an open-ended question where additional parks should be located, respondents named North Stafford, South Stafford, Courthouse area and Crow's Nest.

1.3.10 Survey Results: Economy and Business Services

While 74 percent of survey respondents either agreed or strongly agreed that they shop in Stafford, almost the same proportion (75 percent) shop in the suburban Fredericksburg area including Spotsylvania Mall, Central Park and Massaponax. When asked in an open-ended question what other places they shop, respondents named Northern Virginia, Potomac Mills, Woodbridge and Quantico.

Respondents were fairly evenly split on the need for additional retail centers in Stafford – 40 percent agreed or strongly agreed and 38 percent disagreed or strongly disagreed and the balance neither agreed nor disagreed. While they may not be able to agree on whether they want more retail shopping opportunities, the majority (71 percent) think that Stafford should increase business development as a way of increasing tax generation. At the same time, they also agree (81 percent) that there should be measures available for rural landowners to preserve their land in its natural state.

1.3.11 Survey Results: Additional Comments

Survey respondents were asked how long they plan to stay in Stafford and the majority (53 percent) plan to stay 15 years or longer. When asked in an open-ended question if they were to leave and why, respondents named jobs and retirement, but they also named traffic congestion, taxes and cost of living as influencing their decisions to leave.

1.4 Public Workshops

Public workshops were held June 6 and 7 2006 and October 11 and 12, 2006. The June workshops were designed to help participants identify issues. In October, the participants worked with the issues identified in June to prioritize the issues identified.

1.4.1 June Workshops

Approximately 100 persons attended the four identical workshops held in June 2006. The format of the workshops included individual and group input. The individual input is summarized below.

INDIVIDUAL INPUT

Table F-1 Public Issue Identification: Individual Input

Land Use	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
The County should consider preserving unique natural features and areas to protect open space and encourage public access.	64.1%	18.8%	14.1%	3.1%	0.0%
Stafford County needs to encourage the development of low-cost housing choices	12.9%	40.3%	22.6%	21.0%	3.2%
The overall look and aesthetic quality of residential and commercial development in the County should be better.	22.2%	44.4%	25.4%	6.3%	1.6%
Mixed-use developments with both commercial and residential components should be encouraged in Stafford.	29.5%	39.3%	9.8%	13.1%	8.2%

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Circulation					
I am concerned with the volume of traffic in the County	82.3%	12.9%	1.6%	3.2%	0.0%
Pedestrian Safety is an issue in Stafford and there is a need for more sidewalks.	40.3%	30.6%	19.4%	8.1%	1.6%
There is a need for official bike lanes in the County	20.6%	39.7%	23.8%	7.9%	7.9%
A comprehensive recreational trail system is needed in the County	27.0%	34.9%	20.6%	14.3%	3.2%
Additional Roads are needed in the County	49.2%	16.4%	26.2%	6.6%	1.6%

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Economy					
There is a need for additional Commercial Development	31.7%	31.7%	20.0%	11.7%	5.0%
There is a need for additional Industrial Development	30.0%	35.0%	18.3%	11.7%	5.0%
Opportunities for tourism development should be identified and pursued	23.3%	40.0%	30.0%	6.7%	0.0%
Historic resources enhance Stafford County's quality of life	40.0%	40.0%	18.3%	1.7%	0.0%

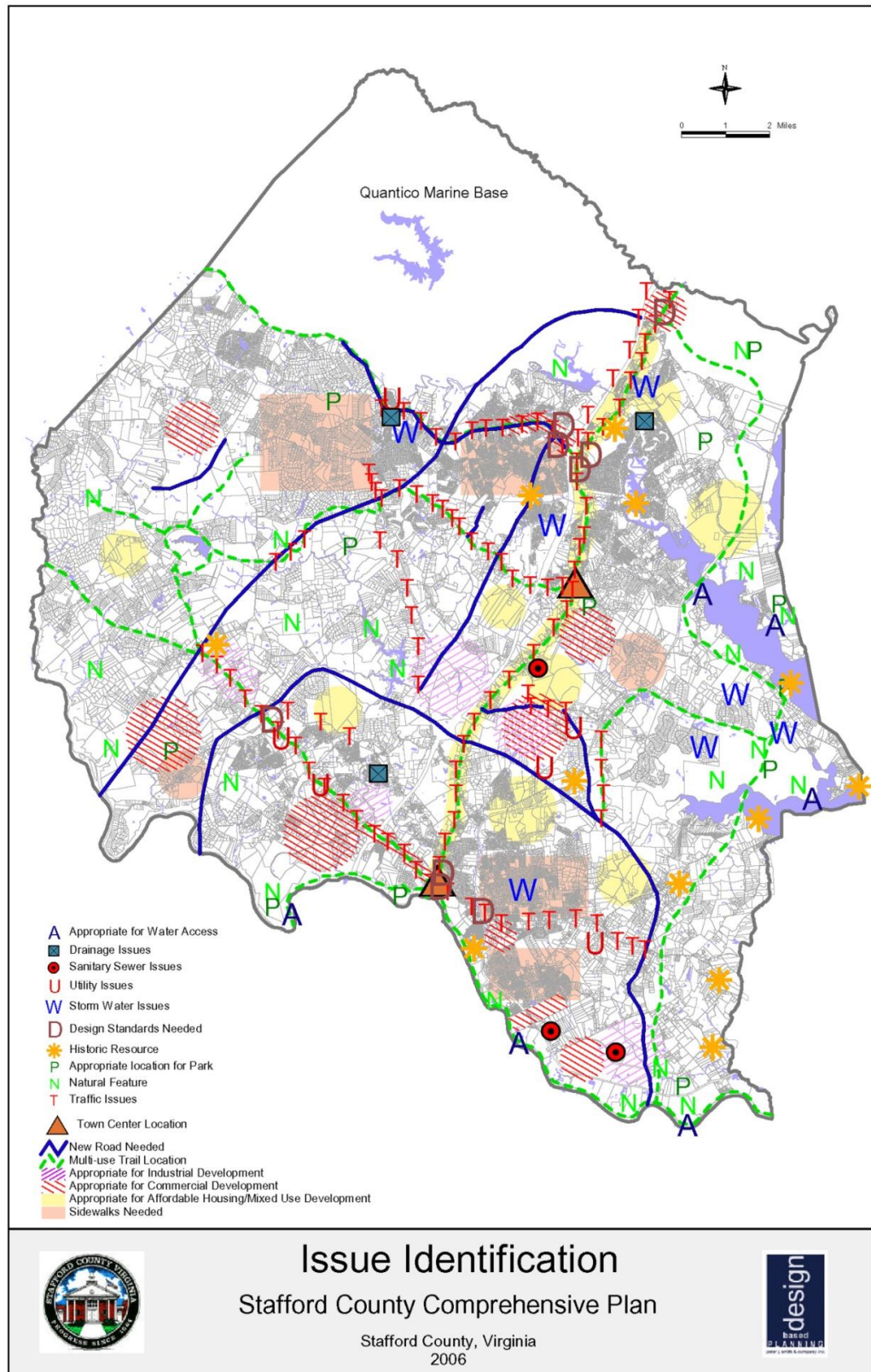
	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Community Services					
Stafford County's infrastructure is adequate for current and future needs	11.7%	15.0%	33.3%	23.3%	16.7%
Stafford County should identify areas for parks, open space and water access	48.3%	33.3%	15.0%	1.7%	1.7%
Stafford County has distinct neighborhoods that should be preserved	23.7%	30.5%	30.5%	11.9%	3.4%
Stafford County has an identifiable "downtown" or center	6.7%	18.3%	18.3%	21.7%	35.0%

Community Character	Urban	Suburban	City	Villages	Hamlets	Rural
Describe Stafford's Existing Character	4%	70%	0%	5%	0%	21%
Describe Stafford's Future Character	18%	61%	2%	11%	2%	7%
	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	
There are adequate shopping opportunities in Stafford	27.4%	29.0%	17.7%	14.5%	11.3%	
Adequate cultural activities are available in Stafford	3.4%	10.2%	27.1%	30.5%	28.8%	
Stafford's community character is changing too quickly because of development pressure	56.7%	10.0%	16.7%	6.7%	10.0%	

1.4.1.1 Group Input

Participants in the public workshop were asked to indicate issue areas on maps provided at the workshop. A synthesis of the Issue Identification mapping exercise appears on the following page.

Figure F-1 – Synthesis Map – Issue Identification



1.4.2 Public Workshops, October 11 and 12, 2006

A second round of public workshops was held October 11 and 12, 2006. These workshops were designed to help participants express their priorities on issues that were identified in the first round of input. As with the first round of workshops, there were individual and group input sessions. The following table shows the rankings participants provided during the individual input portion of the program.

Table F-2 Priority Setting: Individual Input

Circulation Question #1	Rank
Increase Capacity of Existing Roads	1
Develop Mixed Use Transit-oriented Developments	2
Build New Roads	3
Increase job opportunities in Stafford	4
Develop Trail System for Alternative Vehicle Use	5
Do Nothing	6
Circulation Question #2	Rank
Concentrate Residential Development away from Rural Areas	1
Require Traffic Studies for Proposed Developments	2
Better Standards for Internal Circulation	3
Adopt stronger requirements for multi-point ingress/egress	4
Connect new Residents with Businesses in Stafford	5
Do Nothing	6
Land Use & Housing Question #1	Rank
Establish Standards of Sustainability	1
Provide incentives for sustainable Development	2
Review developments outside UGA based on demand	3
Make decisions in the Context of Comp Plan	4
Allow Rural Land Owners to Trade Density	5
Do Nothing	6
Land Use & Housing Question #2	Rank
Require Developers to Integrate Affordable Housing	1
Identify Areas for Higher Density	2
Set Aside Areas for Affordable Housing	3
Fund Agencies that Specialize in Affordable Housing	4
Relax Housing Proffer Guidelines	5
Do Nothing	6
Environment & Infrastructure Question #1	Rank
Expand Low-impact Development Ideals	1
Adopt Strict Setback Requirements	2
Strictly enforce stormwater laws	3
Acquire Sensitive Land for Protection	4
Require Air Quality & Noise Impact Studies	5
Do Nothing	6

Environment & Infrastructure Question #2	Rank
Direct New Development to Areas with Adequate Infrastructure	1
Adopt Public Infrastructure Standards	2
Add Residential Units where infrastructure is available	3
Limit Infrastructure Development Outside UGA	4
Limit the number of By-right Residential Units	5
Do Nothing	6
School Question #1	Rank
Adjust Teachers Salaries	1
High Priority in Budget	2
Assure Class Sizes at All Levels	3 (Tie)
Develop School Sites with Multi Purpose Uses	3 (Tie)
Explore ways to Creatively Finance	5
Encourage the Development of Neighborhood Schools	6
Continue the Policy of No Portable Classrooms	7
Do Nothing	8
School Question #2	Rank
Integrate 21st Century Technology	1
Train Teachers on Techniques for Integrated Technology	2
Continue to Develop CTE Program	3
Create Free Standing CTE	4
Initiate an IB Program	5
Develop Lap-Top Program	6
Do Nothing	7
Parks, Open Space Question #1	Rank
Identify and Acquire Land for Parks Now	1
Use Proffers to Acquire Land	2
Acquire Land for Conservation and Recreation at the Same Time	3
Identify and Acquire Land for Parks As Needed	4
Pay an Annual Fee to Fredericksburg	5
Do Nothing	6
Parks, Open Space Question #2	Rank
Create Stafford County Legislation to Identify and Protect Resources	1
Acquire Culturally Significant Property	2
Sponsor More Public Education Ops	3
Establish Additional Volunteer Groups	4
Fund Protection of Cultural Resources	5
Hire Additional Cultural Staff	6
Do Nothing	7

1.4.2.1 Group Input

Participants were asked to indicate priorities on maps that represented the issues they had identified during the previous round of input sessions. The results are indicated on the map below.

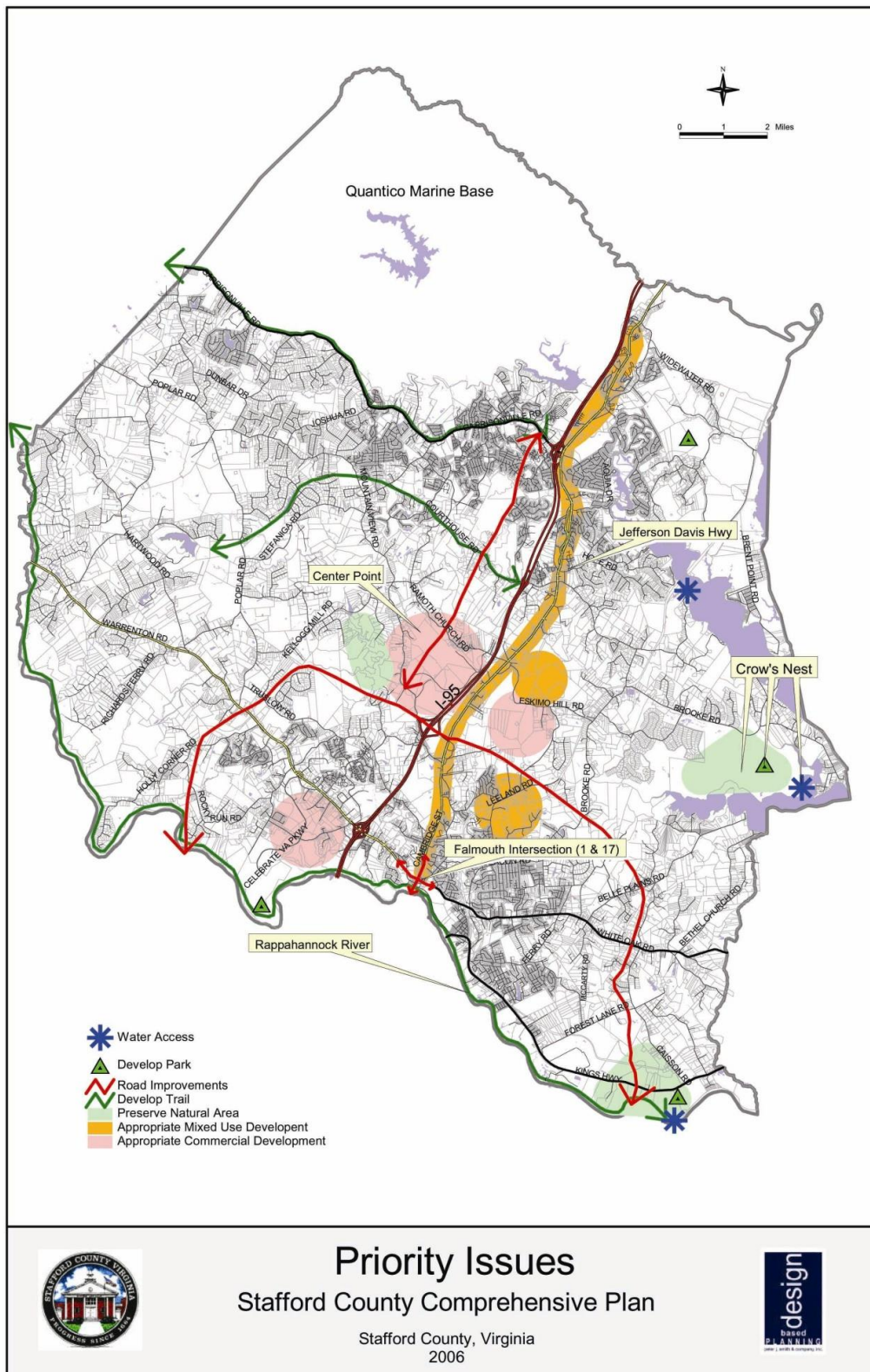


Figure F-2 – Synthesis Map – Priority Issues

G. Transportation Plan Background Information

Road Improvements Sorted by Route Number

Route	Road Name	From	To	Future	R/W	Urban / Rural	Cost (in millions)
1	Cambridge Street / Jefferson Davis Highway	Fredericksburg County Line	Accokeek Creek Bridge	6	160	Urban	\$135.72
1	Jefferson Davis Highway	Accokeek Creek Bridge	Hope Road	6	120	Urban	\$31.49
1	Jefferson Davis Highway	Hope Road	Prince William County Line	6	160	Urban	\$156.43
17	Warrenton Road	Interstate 95	Berea Church Road	8	160	Urban	\$108.11
17	Warrenton Road	Berea Church Road	Truslow Road Extended	6	145	Urban	\$53.87
212	Butler Road	Cambridge Street	Chatham Heights Road	4	110	Urban	\$18.98
218	White Oak Road	Deacon / Cool Springs Road	Caisson / Newton Road	4	110	Urban / Rural	\$55.13
218	White Oak Road	Caisson / Newton Road	King George County Line	2	60	Rural	\$7.06
600	Bethel Church Road	White Oak Road	King George County Line	2	60	Rural	\$9.90
601	Forest Lane Road	Kings Highway	Caisson Road	2	60	Urban / Rural	\$9.22
601	Hollywood Farm Road	Caisson Road	Kings Highway	2	60	Rural	\$8.84
602	Chapel Green Road	White Oak Road	King George County Line	2	60	Rural	\$5.58
603	Caisson Road	Kings Highway	White Oak Road	2	60	Rural	\$11.88
603	Newton Road	White Oak Road	Belle Plains Road	2	60	Rural	\$5.38
604	Belle Plains Road	White Oak Road	End of State Maintenance	2	60	Rural	\$15.05
604	McCarty Road	Forest Lane Road	White Oak Road	2	60	Rural	\$8.98
605	New Hope Church Road	White Oak Road	End of State Maintenance	2	60	Rural	\$9.57
606	Ferry Road	Kings Highway	White Oak Road	2	60	Urban	\$12.43
607	Deacon Road	Leeland Road	Brooke Road	4	110	Urban	\$18.14
608	Brooke Road	New Hope Church Road	End of State Maintenance	2	60	Urban / Rural	\$38.19
610	Garrisonville Road	Fauquier County Line	Joshua Road	2	60	Urban / Rural	\$19.03
610	Garrisonville Road	Joshua Road	Shelton Shop Road	4	110	Urban	\$28.56
610	Garrisonville Road	Shelton Shop Road	Jefferson Davis Highway	6	135	Urban	\$72.93
611	Widewater Road	Telegraph Road	Arkendale Road	2	60	Urban / Rural	\$13.93
612	Hartwood Road	Poplar Road	Warrenton Road	2	60	Rural	\$23.40

Route	Road Name	From	To	Future	R/W	Urban / Rural	Cost (in millions)
612	Heflin Road	Poplar Road	Tacketts Mill Road	2	60	Rural	\$3.96
614	Cropp Road	Spotted Tavern Road	Fauquier County Line	2	60	Rural	\$3.47
614	Spotted Tavern Road	Cropp Road	Hartwood Road	2	60	Rural	\$8.42
615	Skyline Drive	Cropp Road	Hartwood Road	2	60	Rural	\$5.94
616	Poplar Road	Warrenton Road	Fauquier County Line	2	60	Urban / Rural	\$33.04
621	Marlborough Point Road	Brooke Road	End of State Maintenance	2	60	Rural	\$8.42
624	Layhill Road	Forbes Street	Cambridge Street	4	110	Urban	\$2.52
624	Morton Road	Leeland Road	Primmer House Road	2	60	Urban	\$4.44
626	Leeland Road	Deacon Road	Morton Road	4	110	Urban	\$25.70
626	Leeland Road	Morton Road	Potomac Run Road	2	60	Urban / Rural	\$1.90
626	Potomac Run Road	Eskimo Hill Road	Leeland Road	2	60	Rural	\$7.69
627	Forbes Street	Cambridge Street	Layhill / Morton Road	2	60	Urban	\$9.61
627	Mountain View Road	Poplar Road	Choptank Road	2	60	Urban / Rural	\$11.77
627	Mountain View Road	Choptank Road	Stefaniga Road	4	120	Urban	\$20.83
627	Mountain View Road	Stefaniga Road	Centreport Parkway	2	60	Urban / Rural	\$14.76
628	Ramoth Church Road	Woodcutter Road extended	Interstate 95	4	110	Urban	\$38.30
628	American Legion Road	Interstate 95	Jefferson Davis Highway	4	110	Urban	\$5.54
628	Eskimo Hill Road	Jefferson Davis Highway	Brooke Road	2	60	Urban / Rural	\$9.97
628	Winding Creek Road	Courthouse Road	Shelton Shop Road	2	60	Urban	\$8.87
629	Andrew Chapel Road	Courthouse Road	Brooke Road	2	60	Urban / Rural	\$3.20
630	Courthouse Road	Spartan Drive	End of State Maintenance	2	60	Rural	\$11.25
630	Courthouse Road	Shelton Shop Road	Austin Ridge Drive	4	135	Urban	\$64.51
631	Bells Hill Road	Jefferson Davis Highway South	Jefferson David Highway North	2	60	Urban	\$7.76
633	Arkendale Road	Widewater Road	Brent Point Road	2	60	Rural	\$6.93
635	Decatur Road	Widewater Road	End of State Maintenance	2	60	Rural	\$9.74
637	Telegraph Road	Interstate 95	Woodstock Lane	2	60	Urban	\$10.40
639	Woodstock Lane	Telegraph Road	Jefferson Davis Highway	2	60	Urban	\$0.83

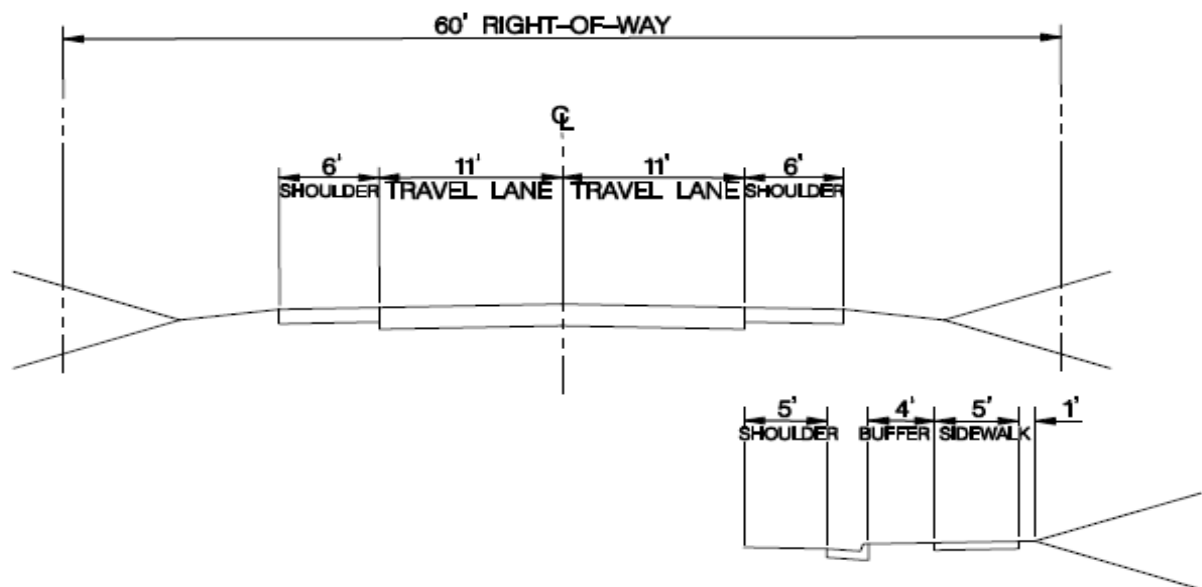
Route	Road Name	From	To	Future	R/W	Urban / Rural	Cost (in millions)
641	Onville Road	Garrisonville Road	Quantico Marine Corp Base	2	60	Urban / Rural	\$4.83
642	Barrett Heights Road	Garrisonville Road	Onville Road	2	60	Urban	\$3.23
643	Joshua Road	Garrisonville Road	Mountain View Road	2	60	Urban / Rural	\$8.47
644	Rock Hill Church Road	Mountain View Road	Garrisonville Road	2	60	Rural	\$9.04
645	Dunbar Road	Tacketts Mill Road	Rock Hill Church Road	2	60	Rural	\$4.95
646	Tacketts Mill Road	Poplar Road	Fauquier County Line	2	60	Rural	\$9.90
628	Ramoth Church Road	Woodcutter Road	Courthouse Road	2	60	Rural	\$7.43
640	Porter Lane	Enon Road	End of State Maintenance	2	60	Urban	\$1.06
648	Shelton Shop Road	Mountain View Road	Garrisonville Road	4	110	Urban	\$33.43
648	Stefaniga Road	Poplar Road	Mountain View Road	2	60	Rural	\$11.78
649	Richland Road	Warrenton Road	Hartwood Road	2	60	Rural	\$6.27
650	Mount Olive Road	Poplar Road	Kellogg Mill Road	2	60	Rural	\$9.21
651	Kellogg Mill Road	Poplar Road	Ramoth Church Road	2	60	Rural	\$14.06
652	Truslow Road	Poplar Road	Cambridge Street	2	60	Urban	\$31.23
654	Berea Church Road	Truslow Road	Warrenton Road	2	60	Urban	\$6.14
654	Rocky Run Road	Holly Corner Lane	River Acres Lane	2	60	Rural	\$4.85
654	Rocky Run Road	Greenbank Road	Burgess Lane	2	60	Rural	\$2.38
655	Holly Corner Road	River Ridge Lane	Warrenton Road	2	60	Urban / Rural	\$14.30
656	Greenbank Road	Warrenton Road	End of State Maintenance	2	60	Urban / Rural	\$8.32
658	Brent Point Road	Decatur Road	End of State Maintenance	2	60	Rural	\$16.43
670	Sanford Drive	Greenbank Road	Paul Lane	2	60	Urban / Rural	\$5.99
670	Sanford Drive	Paul Lane	Warrenton Road	4	110	Urban	\$11.26
682	Colebrook Road	Ferry Road	McCarty Road	2	60	Urban / Rural	\$6.39
684	Staffordboro Boulevard	Garrisonville Road	Sunningdale Drive	4	110	Urban	\$2.69
684	Staffordboro Boulevard	Sunningdale Drive	Pike Place	2	60	Urban	\$0.96
687	Hope Road	Jefferson Davis Highway	End of State Maintenance	2	60	Urban / Rural	\$12.86
691	Stony Hill Road	Hartwood Road	Poplar Road	2	60	Rural	\$9.57
691	Storck Road	Warrenton Road	Hartwood Road	2	60	Rural	\$6.86

Route	Road Name	From	To	Future	R/W	Urban / Rural	Cost (in millions)
721	Olde Concord Road	Hope Road	End of State Maintenance	2	60	Urban	\$5.17
753	Enon Road	Porter Lane	Jefferson Davis Highway	4	110	Urban	\$3.53
753	Enon Road	Hulls Chapel Road	Truslow Road	4	110	Urban	\$6.89
753	Enon Road	Porter Lane	Hulls Chapel Road	2	60	Urban	\$1.57
754	Shackelford Well Drive	Hartwood Road	Poplar Road	2	60	Rural	\$6.01
1264	Parkway Boulevard	Garrisonville Road	Kimberly Lane	2	60	Urban	\$5.61
1706	Plantation Drive	Lichfield Boulevard	Truslow Road	4	110	Urban	\$19.15
2140	Pine View Drive	Centreport Parkway	Enon Road	2	60	Urban	\$2.91
8900	Centreport Parkway	Ramoth Church Road	Berea Parkway (new)	4	110	Urban	\$50.74

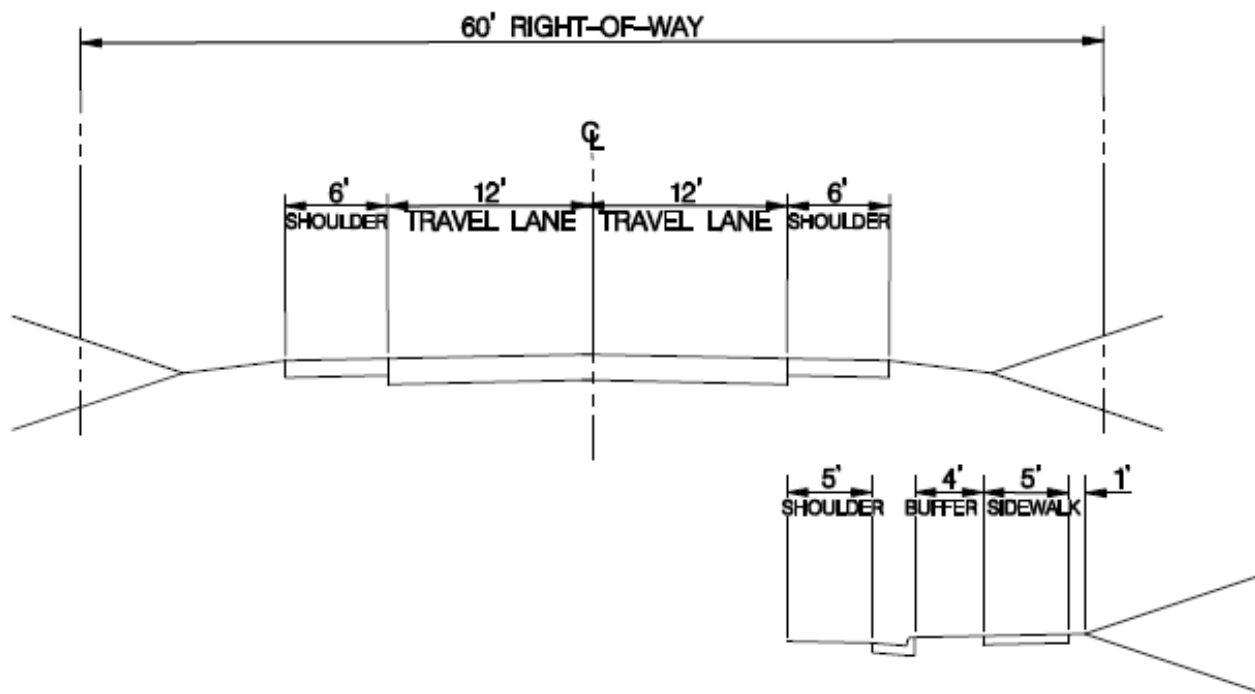
New Roads

Road Name	From	To	Future	R/W	Urban / Rural	Cost (in millions)
New I-95 Connector East	US-1	Courthouse Road East	4	110	Urban	Unknown
Mine Road Extension	Austin Ridge Drive	Ramoth Church Road	4	110	Urban	\$96.77
Mine Road Extension	Centreport Parkway	Enon Road	4	110	Urban	\$20.43
Woodcutter Road	Courthouse Road	Kellogg Mill Road	4	110	Urban	\$35.75
Woodcutter Extended	Kellogg Mill Road	Ramoth Church Road	4	110	Urban	\$6.99
Austin Ridge Drive Extended	Eustace Road	Parkway Boulevard	2	60	Urban	\$12.10
Embrey Mill Road extended East	Embrey Mill Road	Mine Road	2	60	Urban	\$6.05
Embrey Mill Road extended West	Embrey Mill Road	Walpole Street	2	60	Urban	\$2.87
Eskimo Hill Connector	Jefferson Davis Highway	Eskimo Hill Road	2	60	Urban / Rural	\$7.75
Kellogg Mill Road extended	Woodcutter Road	Mine Road extended	2	60	Urban	\$17.39
Truslow Road Connector	Truslow Road	Jefferson Davis Highway	2	60	Urban	\$7.56
Warrenton Road Parallel Road	Sanford Drive	Stafford Lakes Parkway	2	60	Urban	\$14.52
Truslow Road extended	Poplar Road	Warrenton Road	4	110	Urban	\$10.75
New I-95 Interchange at Courthouse Road	Courthouse Road West	Jefferson Davis Highway	TBD	TBD	Urban	Unknown

Typical Roadway Sections



MAJOR LOCAL
SCALE: 1" = 10'



MINOR COLLECTOR
SCALE: 1" = 10'

